

SAMSUNG

SYSTEM AIR CONDITIONER

	INDOOR UNIT	OUTDOOR UNIT
Model :	ACN026NDEHA ACN035NDEHA ACN052NDEHA ACN060NDEHA ACN071NDEHA NS0261DXEA NS0351DXEA	RC026DHXEA RC035DHXEA RC052DHXEA RC060DHXEA RC071DHXEA
Model code:	ACN026NDEHA/EU ACN035NDEHA/EU ACN052NDEHA/EU ACN060NDEHA/EU ACN071NDEHA/EU NS0261DXEA NS0351DXEA	RC026DHXEA RC035DHXEA RC052DHXEA RC060DHXEA RC071DHXEA

SERVICE Manual

AIR CONDITIONER



ACN026NDEHA
ACN035NDEHA
ACN052NDEHA
ACN060NDEHA
ACN071NDEHA

NS0261DXEA
NS0351DXEA



RC026DHXEA
RC035DHXEA
RC052DHXEA



RC060DHXEA
RC071DHXEA

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Refer to the service manual in the GSPN(see the rear cover) for the more information.

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1. Precautions

1-1 Precautions for the Service

- **Use the standard parts when replacing the electric parts.**
 - Confirm the model name, rated voltage, rated current of the electric parts.
- **When repairing the equipment, connection of the harness parts must be firm and solid.**
 - A loose connection may cause noise or other malfunction.
- **When assembling and disassembling the equipment while it is laid down, lay it on soft cloth.**
 - Otherwise it may scratch the back of the exterior of the product.
- **Remove dust or dirt completely from the housing block, wiring block and service parts during repair.**
 - This helps prevent the danger of fire caused by tracking or short circuit.
- **Fasten the valve caps of service valves and charging valves of outdoor unit as much as possible using adjustable wrenches.**
- **Check the status of the components' assembly after repair service.**
 - The status must be the same as before the repair service.

1-2 Precautions related to static electricity and PL

- **The PCB power supply block is susceptible to static electricity. Therefore, care must be taken during repair or measuring while the power is on.**
 - Wear insulation gloves for PCB repair or measuring.
- **Check whether the installation location is at least two meters away from other electronic products such as TV, video, or audio.**
 - Otherwise, the video quality might be degraded or noise might be generated.
- **Do not let end users repair the products themselves.**
 - Unauthorized disassembly might cause electric shock or fire.

1-3 Precautions related to product safety

- **Do not pull the power cord and do not touch the power plug or aux power switch with wet hands.**
 - It might cause electric shock or fire.
- **A damaged power line or power plug must be replaced to prevent danger.**
- **Do not bend the power cable with excessive force, and do not place a heavy weight on the case as it might damage the cable.**
 - It might cause electric shock or fire.
- **Do not use multiple electric outlets.**
 - This might cause electric shock or fire.
- **Connect the ground terminal when necessary.**
 - You must connect the ground terminal if you determine that there is a danger of electric leakage due to moisture or water.
- **Unplug the power cable or turn off the auxiliary power switch for electric part replacement and repair service.**
 - Otherwise it might cause electric shock.
- **Instruct end users to separate the batteries from the remote controllers and store them separately when the product is not used for long time.**
 - Otherwise leakage from the dry cell may cause problems with the remote controller.

1-4 Other precautions

- **The pipes should have no leaks during installation, and the compressor must be stopped before removing connecting pipes for pump down work. Operating the compressor while the service valve is open and coolant pipe is not properly connected may cause explosion or injury due to abnormal high pressure created inside the coolant cycle as the air can be absorbed through the pipe.**
- **Pump Down work procedure (When uninstalling the product)**
 - Turn on the air conditioner, select cooling operation, and run the compressor for more than three minutes.
 - Release the high pressure and low pressure valve caps.
 - Close the high pressure valve completely using an L-wrench
 - After about two minutes, close the low pressure valve completely.
 - Stop running the air conditioner.
 - Separate the connecting pipe.

2. Product Specifications

2-1 The Feature of Product

■ Built-in Cassette Type

After installed, the air conditioner can be harmonized with a room interior.

■ High Performance & Energy Saving

With the advanced BLDC inverter technology, it makes a room cool with highly energy saving and arises the efficiency of air conditioner.




■ Long Ambient Operation(In Low Temperature)

It can arise the reliability and the capacity of the air conditioner, especially operated in low temperature.




■ Eco-friendly Product(Lead-Free, RoHS, WEEE)

■ Easy installation of ultra-lightweight indoor unit

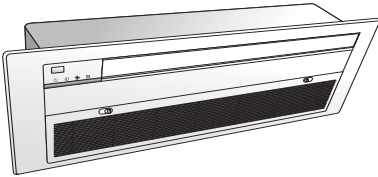


2-2 Product Specifications

ITEM			ACN060NDEHA/EU RC060DHXEA	ACN071NDEHA/EU RC071DHXEA
IMAGE	Indoor Unit			
	Outdoor Unit			
	Remote Controller			
Power	Product		1Φ, 220~240V/50Hz	1Φ, 220~240V/50Hz
Indoor	L x H x D	mm	575*250*575	575*250*575
Panel	L x H x D	mm	670*45*670	670*45*670
Outdoor	L x H x D	mm	798 x 880 x 310	798 x 880 x 310
Indoor	Product	kg(Net)	12.0	12.0
Outdoor	Product	kg(Net)	54.5	54.5
Capacity	Cooling(STD)	W	5800	6800
	Heating(STD)	W	7000	7500
Power Consumption	Cooling(STD)	W	1809	2120
	Heating(STD)	W	2180	2340
Operation current	Cooling(STD)	A	8.3	9.7
	Heating(STD)	A	10	10.7
Noise (Cooling/ Heating)	Indoor unit	In case of strongest air blow	dBA	45/46
	Outdoor unit	In case of strongest air blow	dBA	60/60
Refrigerant(R410A)		g	1,800	1,800
Connecting Pipe	Liquid	mm	6.35	6.35
	Gas	mm	15.88	15.88
Additional Refrigerant (R410A)		g/m	25	25
Standard		m	5	5
Extension length(Total)		m	50	50
Extension length(Elevation)		m	30	30
Option Code		Product Option	015077-18626E-273C46-370040	015077-166381-274750-370040
		Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

Product Specifications (cont.)

ITEM				ACN026NDEHA/EU RC026DHXEA	ACN035NDEHA/EU RC035DHXEA	ACN052NDEHA/EU RC052DHXEA
IMAGE	Indoor Unit					
	Outdoor Unit					
	Remote Controller					
Power	Product			1Φ, 220-240V/50Hz	1Φ, 220-240V/50Hz	1Φ, 220-240V/50Hz
Indoor	L x H x D		mm	575*250*575	575*250*575	575*250*575
Panel	L x H x D		mm	670*45*670	670*45*670	670*45*670
Outdoor	L x H x D		mm	790*285*545	790*285*545	790*285*545
Indoor	Product		kg(Net)	11.0	11.0	11.7
Outdoor	Product		kg(Net)	33.0	33.0	38.5
Capacity	Cooling(STD)		W	2600	3500	5000
	Heating(STD)		W	3300	4000	5500
Power Consumption	Cooling(STD)		W	730	1090	1560
	Heating(STD)		W	900	1110	1525
Operation current	Cooling(STD)		A	3.7	5.6	7.2
	Heating(STD)		A	4.6	5.7	7
Noise (Cooling/ Heating)	Indoor unit	In case of strongest air blow	dB(A)	38/39	41/42	43/44
	Outdoor unit	In case of strongest air blow	dB(A)	51/51	53/53	58/58
Refrigerant (R410A)			g	950	950	3,800
Connecting Pipe		Liquid	mm	6.35	6.35	6.35
		Gas	mm	9.53	9.53	12.7
Additional Refrigerant (R410A)			g/m	-	-	-
Standard			m	5	5	5
Extension length(Total)			m	20	15	20
Extension length(Elevation)			m	15	20	30
Option Code			Product Option	015077-1660F8-271A21-370000	015077-166219-272328-370000	015077-17625D-273437-370040
			Installation Option	020000-100000-200000-300000	020000-100000-200000-300000	020000-100000-200000-300000

Product Specifications (cont.)


ITEM			NS0261DXEA RC026DHXEA	NS0351DXEA RC035DHXEA
IMAGE	Indoor Unit			
	Outdoor Unit			
	Remote Controller			
Power	Product		1Φ, 220~240V/50Hz	1Φ, 220~240V/50Hz
Indoor	L x H x D	mm	975*135*410	975*135*410
Panel	L x H x D	mm	1180*25*460	1180*25*460
Outdoor	L x H x D	mm	790*548*285	790*548*285
Indoor	Product	kg(Net)	10.0	10.0
Outdoor	Product	kg(Net)	33.0	33.0
Capacity	Cooling(STD)	W	2600	3500
	Heating(STD)	W	3300	4000
Power Consumption	Cooling(STD)	W	695	1140
	Heating(STD)	W	910	1160
Operation current	Cooling(STD)	A	3.3	3.3
	Heating(STD)	A	5.3	5.5
Noise (Cooling/ Heating)	Indoor unit	In case of strongest air blow	dBA	38/40
	Outdoor unit	In case of strongest air blow	dBA	51/51
Refrigerant(R410A)		g	950	950
Connecting Pipe	Liquid	mm	6.35	6.35
	Gas	mm	9.52	9.52
Additional Refrigerant (R410A)		g/m	20	20
Standard		m	5	5
Extension length(Total)		m	20	20
Extension length(Elevation)		m	15	15
Option Code		Product Option	017057-1860F8-271A23-370010	017057-17624D-272328-370010
		Installation Option	020000-100000-200000-300000	020000-100000-200000-300000

2-3 Accessories

MINI 4 WAY

Item	Description	Code No.	Q'ty	Remark
	Ass'y drain hose	DB94-03287A	1	Essential Offer (Indoor Unit)
	Cable-tie	DB65-10088C	6	
	Seal-drain ass'y	DB62-11028A	1	
	Seal-drain ass'y	DB62-11028H	1	
	Seal-drain ass'y	DB62-11028J	1	
	ASSY INSTALL MANUAL/USER MANUAL	DB98-34365A DB98-34366A	1/1	
	ASSY-INSTALLATION MANUAL	DB98-34367A	1	Essential Offer (Outdoor Unit)
	Drain Plug	DB67- 00477A(026/035/052) DB67-20011A(060/071)	1	
	Rubber Leg	DB73-20134A	4	
	BOLT	6011-003975	4	Essential Offer (Panel)
	ASSY-INSTALLATION MANUAL	DB98-34364A	1	
	CARD WARRNATY	DB68-02596B	1	

SLIM 1 WAY

Item	Description	Code No.	Q'ty	Remark
	Pattern sheet	DB69-01936A	1	Essential Offer (Indoor Unit)
		DB69-01947A	1	
		DB69-01947B	1	
	Seal-drain ass'y	DB62-05810A	1	
	Insulation-base	DB72-00401C	2	
	Grommet hanger	DB63-00237A	8	
	Cable tie	DB65-10088C	3	
	Ass'y drain hose joint	DB94-01258C	1	
	Ass'y-installation manual	DB98-34507A	1	

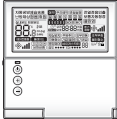


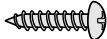


Accessories (cont.)

■ Wireless remote controller (MR-DH00) [Code No. : DB97-17546B]

Item	Descriptions	Code-No.	Q'TY	Remark
	Wireless remote controller	DB93-11115N	1	Optional
	Batteries for remote controller (specification: "AAA" type)	DB47-90024A	2	
	Remote controller holder	DB61-04899A	1	
	M4x16 screw	6002-000581	2	
	User's manual	DB98-33129A	1	







Accessories (cont.)

■ Wired remote controller (MWR-WE10) [Code No. : DB97-17002B]

Item	Descriptions	Code-No.	Q'TY	Remark
	Wired remote controller	DB93-11251B	1	Optional
	Cable tie	DB65-10088B	2	
	Cable clamp	DB65-10074E	3	
	M4x16 Screw	6002-000474	5	
	User's manual	DB98-32810A	1	
	Installation guide	DB98-32811A	1	







Accessories (cont.)

■ Central controller (MCM-A202D) [Code No. : DB97-18602B]

Item	Descriptions	Code-No.	Q'TY	Remark
	Central controller	DB93-03425N	1	Optional
	Cable tie	DB65-10088B	2	
	Cable clamp	DB65-10074E	5	
	M4 X 16 Screw	6002-000474	7	
	User's manual	DB98-33437A	1	
	Installation guide	DB98-33434A	1	

Accessories (cont.)

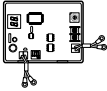


■ Function controller (MCM-A100) [Code No. : DB97-01077A]

Item	Descriptions	Code-No.	Q'TY	Remark
	Function controller	DB93-00757G	1	Optional
	Cable tie	DB65-10088B	2	
	Cable clamp	DB65-10074E	6	
	M4x16 Screw	6002-000474	7	
	User's manual	DB98-27317A	1	
	Installation guide	DB98-27315A	1	

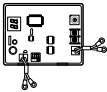
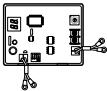



* PC control and DMS cannot be used when using the function controller

Accessories (cont.)


■ Relay (MIM-B13D) [Code No. : DB97-18519A]

Item	Descriptions	Code-No.	Q'TY	Remark
	Relay	DB93-12203A	1	Optional
	Relay power cable (300mm)	DB39-00378B	1	
	Relay communication cable (300mm)	DB39-00253B	1	



■ Relay (MIM-B13E) [Code No. : DB97-04416J]

Item	Descriptions	Code-No.	Q'TY	Remark
	Relay	DB93-03568D	1	Optional
	Relay sub	DB93-03590B	1	
	Relay power cable (1,000mm)	DB93-07895A	1	
	Relay power cable (1,000mm)	DB93-07895B	1	
	Relay communication cable (100mm)	DB93-12164A	1	

MINI 4 WAY Filter accessory

Item	Descriptions	Code-No.	Remark
	Dust filter	DB63-02739A	Basic/ Water wash

SLIM 1 WAY Filter accessory

Type	Item	Descriptions	Code-No.	Remark
Panel (Slim 1way-A type)		Air Filter	DB63-01694A DB63-01695A	Basic/Water washing
Panel (Slim 1way-B type)		Air Filter	DB63-02354A DB63-02355A	Basic/Water washing






3. Disassembly and Reassembly

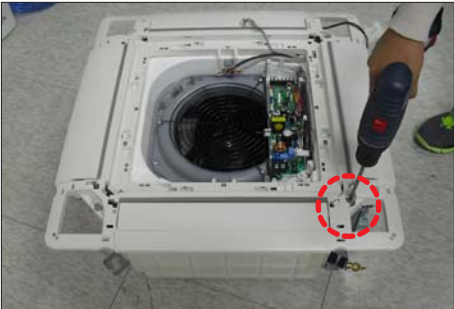
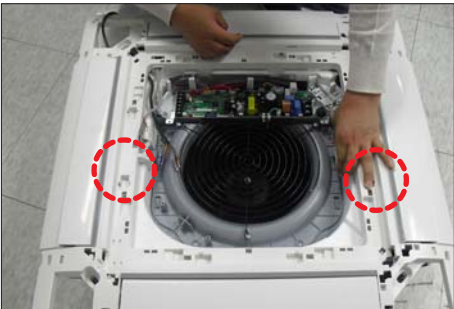

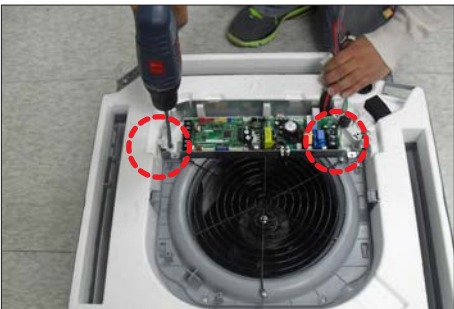

■ Necessary Tools



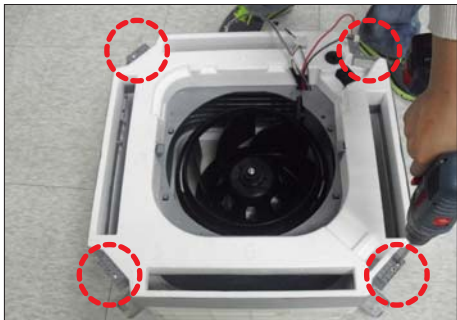
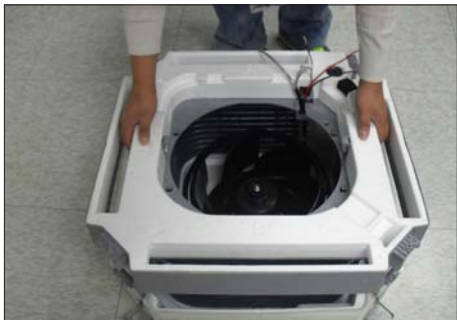
Item	Remarks
+SCREW DRIVER	
Adjustable Wrench (8mm, 10mm, 13mm)	
M6, M8 Hex Wrench	





3-1 Indoor unit

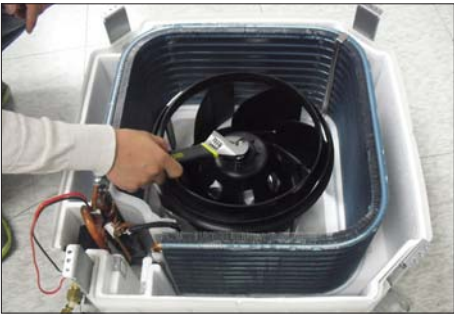
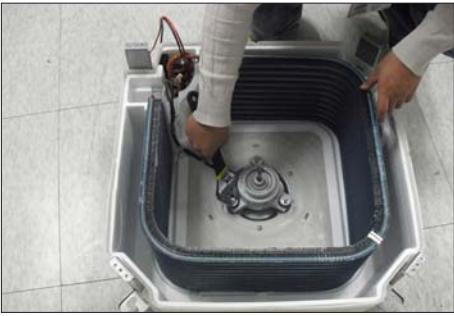
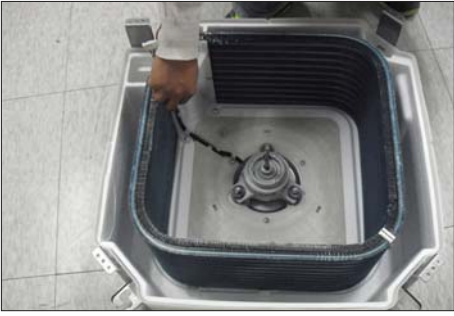
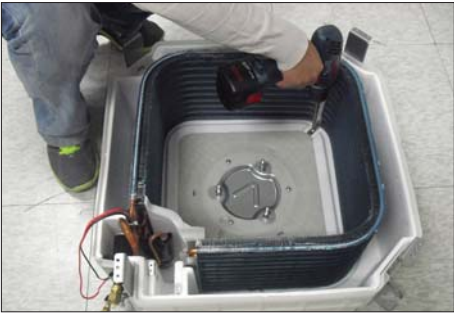
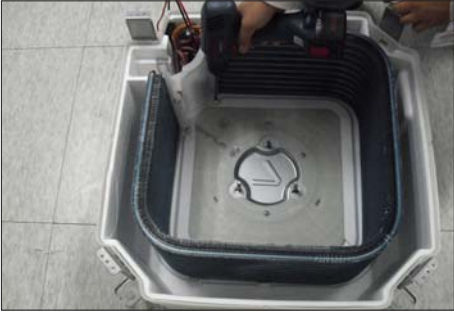
■ ACN026NDEHA/ ACN035NDEHA/ ACN052NDEHA/ ACN060NDEHA/ ACN071NDEHA

No	Parts	Procedure	Remark
1	Panel	<p>1) Pull both hooks and take the grille downward. Two safety clips are mounted to the front grille to prevent it from dropping.</p> <p>2) Detach the safety clip and take up the grille.</p> <p>3) Remove the 2 fixed screws to remove the Control-Box Cover. (Use +Screw Driver)</p> <p>4) Remove the Remocon-Receiver and Blade Connector Wire from the PBA. (3EA)</p> <p>5) Push the 4 panel corners and cover downwards to remove it.</p>	    

No	Parts	Procedure	Remark
		<p>6) Disassemble the bolts that are assembled with the indoor unit at the 4 panel corners.</p> <p>7) Press the Hangers at both sides of the panel inwards, to remove it from the indoor unit's hook. Remove the panel from the indoor unit.</p>	 
2	Control-Box	<p>1) Disconnect the Connector Wire that is connected to the indoor unit's PBA</p> <p>2) Unscrew the 2 fixed screws on both sides of the Control Box, and disassemble the Control Box from the indoor unit.(Use +Screw Driver)</p>	  






No	Parts	Procedure	Remark
3	Bell-Mouth	<p>1) Unscrew the screw fixed on the Bell-Mouth. (Use +Screw Driver)</p> <p>2) Push the Bell-Mouth in the direction opposite to where it's installed on the Control-Box to remove it.</p>	 
4	Drain Pan	<p>1) Unscrew the screws on the 4 corners of the indoor unit. (Use +Screw Driver)</p> <p>2) Remove the Drain Pan from the indoor unit.</p>	 






No	Parts	Procedure	Remark
5	Drain Pump & Hose	<p>1) Remove the 2 fixed screws and disconnect the white drainage hose from the Drain Pump. (Use +Screw Driver)</p> <p>2) Remove the 2 screws and take the Drain-Hose out from the indoor unit to disassemble the transparent Drain-Hose fixed on the side of the indoor unit. (Use +Screw Driver)</p>	  
6	Evap. Temperature Sensor	<p>1) Use your hand to remove the temperature sensor attached to the Evap Pipe along with the fixing clip.</p>	






No	Parts	Procedure	Remark
7	Fan & Motor	<p>1) Turn the hexangular nut attached to the top of the Fan counterclockwise to remove it. Take the Fan out of the Motor.</p> <p>2) Turn the three hexangular nuts on the Motor counterclockwise to remove the nuts. Take the Motor Wires attached to these three locations out with your hands prior to removing the Motor.</p>	  
8	Evaporator	<p>1) Remove the screws of the Steel Holder Evaps that are used to fix the Heat Exchanger, and then remove it. (Use +Screw Driver)</p> <p>2) Remove the 2 fixing screws of the Partition Evap at the Heat Exchanger's In/Out Pipe. (Use +Screw Driver)</p>	 



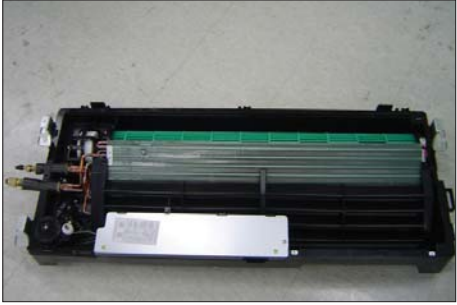


No	Parts	Procedure	Remark
		<p>3) Remove the screw of the Cover Pipe that is used to fix the In/Out Pipe. Remove the In/Out Pipe. (Use +Screw Driver)</p> <p>4) Remove the Heat Exchanger from the indoor unit's cabinet.</p>	  

■ NS0261DXEA/ NS0351DXEA

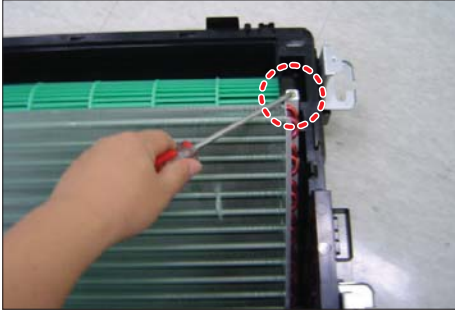
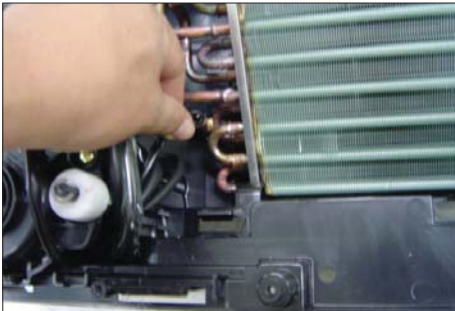

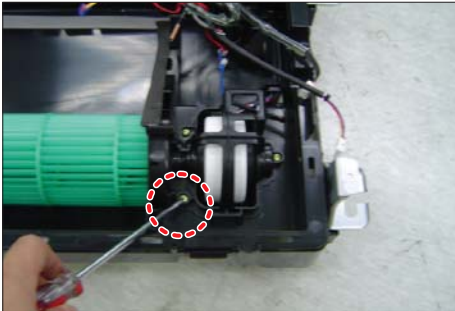

No	Parts	Procedure	Remark
1	Panel & Filter(A type)	<p>1) Press the push button on the Grille to open.</p> <p>2) Separate 1 clip from the Panel then tilt the Grille 45° to remove Grille from the Panel.</p> <p>3) Separate Filter from the Panel.</p> <p>4) Separate 3 cover screws from it.</p> <p>5) Undo 6 fixed screws on the Panel to remove from the Indoor Unit. (Use +Screw Driver.)</p>	    

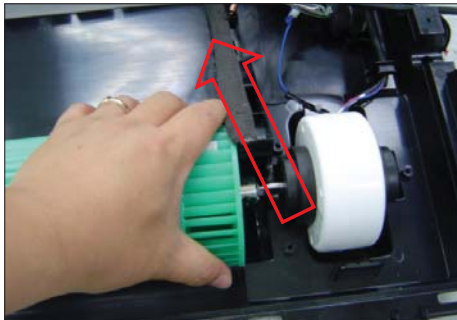
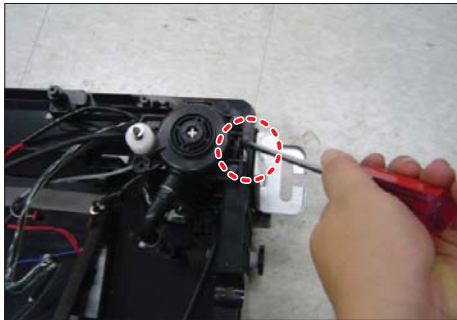
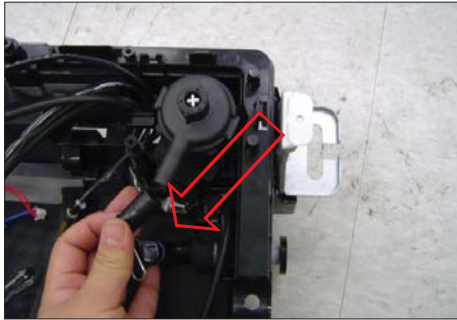

No	Parts	Procedure	Remark
		6) Press the left and right hooks on the Panel to separate Panel from the Indoor Unit.	
	Panel & Filter (B type)	<p>1) Press the [Filter Reset] button on the Wireless Remote Controller once. It will make an induction Panel that is shown in the next picture slide down.</p> <p>2) Spin the 2 connecting levers that link both ends of the induction Panel and gear as shown in the next picture.</p> <p>3) Push the induction Panel forward to remove it.</p>	   

No	Parts	Procedure	Remark
		4) Remove the induction Filter. (2EA)	
		5) Remove the Filter Guide. (2EA)	
		6) Remove the 3 screws covers.	
		7) Remove 4 connecting wires for the Panel and undo the 7 screws that fix the Panel. (Use + Screw Driver.)	
		8) After pulling out 2 Panel fixing hooks, please separate the Panel and the Indoor Unit.	

No	Parts	Procedure	Remark
			
2	Drain Pan	<p>1) Separate 5 fixing screws in the Drain Pan. (Use +Screw Driver.)</p> <p>2) Pull the Drain Pan to separate it from the Indoor Unit.</p> <p>⚠ When separating the Pan please be careful not to touch the board of Heat Exchanger.</p>	 
3	Control In	<p>1) Undo 3 fixing screws in the Control In appliance part to separate the Cover. (Use +Screw Driver.)</p>	 





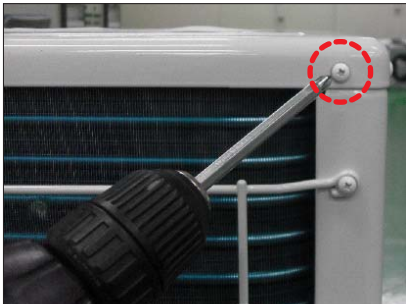
No	Parts	Procedure	Remark
		<p>2) Separate 8 connectors on the PCB of the Indoor Unit.</p> <p>3) Separate the Control In from the Indoor Unit.</p>	  
4	Drain Sub	1) Push the hook on the Drain Sub to separate it.	 


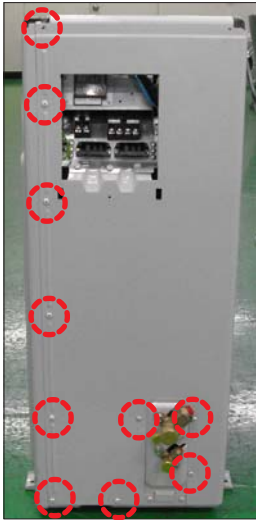
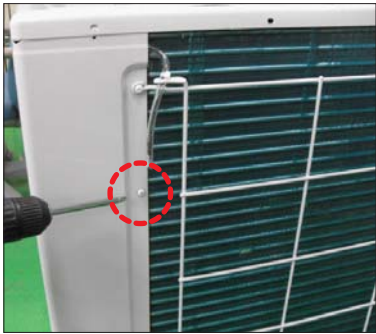

No	Parts	Procedure	Remark
5	Heat Exchanger	<ol style="list-style-type: none"> 1) Undo fixing screw in the Heat Exchanger. (Use +Screw Driver.) 2) Separate the Indoor Unit's Sensor from the Heat Exchanger. 3) Separate the Heat Exchanger from the Indoor Unit. 	  
6	Cross Fan	<ol style="list-style-type: none"> 1) Undo 3 fixing screws on the Cover Fan Motor. (Use +Screw Driver.) 2) Separate the Cover Fan Motor from the Indoor Unit. (Use +Screw Driver.) 	 

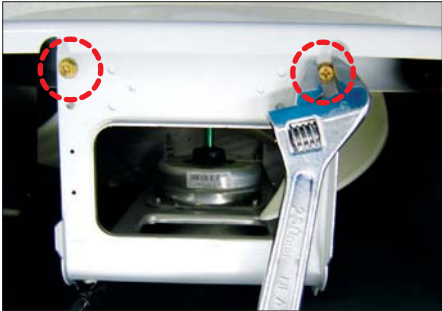

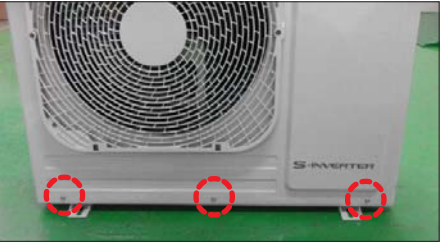
No	Parts	Procedure	Remark
		3) Separate the Cross Fan from the Indoor Unit.	
7	Drain Pump	<p>1) Separate fixing screw in the Cover Drain Pump. (Use +Screw Driver.)</p> <p>2) Separate the Drain Hose from the Drain Pump.</p> <p>3) Separate the Drain Pump from the Indoor Unit.</p>	  


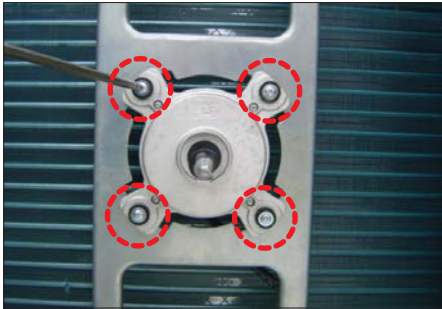

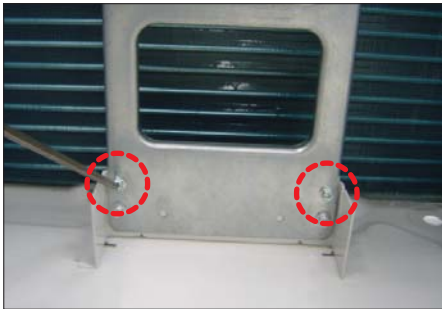
3-2 Outdoor Unit

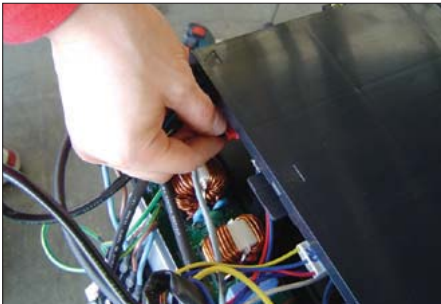

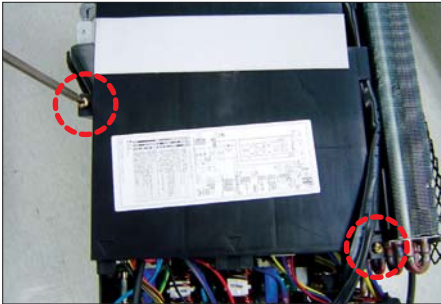


■ RC060DHXEA / RC071DHXEA




No	Parts	Procedure	Remark
1	Common Work	<p>1) Loosen 1 fixing screw of the Cover-Control and detach the Cover Control.</p> <p>2) Loosen each 7 fixing screws and detach the Cabinet Upper.</p>	    

No	Parts	Procedure	Remark
		<p>3) Loosen 2 screws fixed to assemble Control Box with Cabinet-Side RH.</p> <p>4) Loosen fixing screws and detach the Cabinet-Side RH.</p> <p>5) Loosen 2 screws fixed on the Guide Condenser.</p>	   




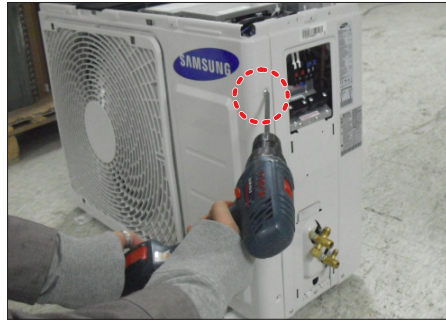

No	Parts	Procedure	Remark
		6) Loosen fixing screws of the Cabinet Front.	   

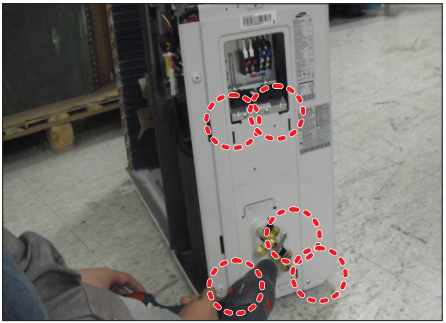
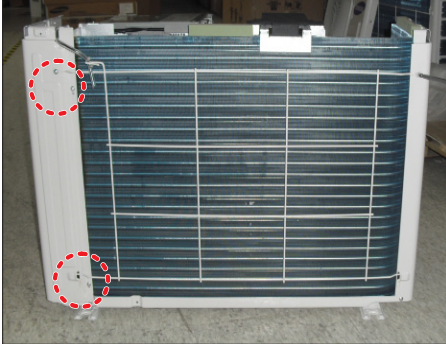
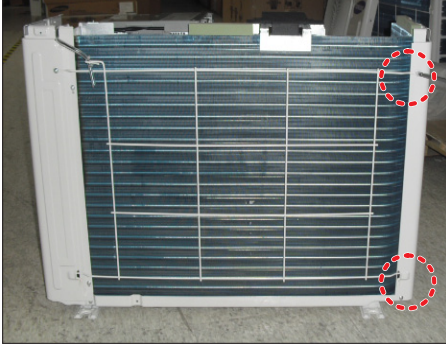
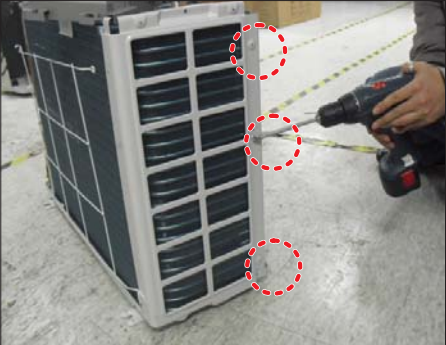
No	Parts	Procedure	Remark
2	Fan & Motor	<p>1) Detach the Nut Flange like the picture on the right side. (Turn counter clockwise because the screw is right-handed.)</p> <p>2) Detach the Fan Propeller.</p> <p>3) Loosen 4 fixing screws to detach the Motor.</p> <p>4) Disconnect the wire between ASS'Y Control Out and Motor.</p> <p>5) Loosen 2 fixing bolts and detach the Bracket Motor.</p>	   




No	Parts	Procedure	Remark
3	ASS'Y Control Out	<ol style="list-style-type: none"> 1) Detach several connectors from the ASS'Y Control Out. 2) Detach several connectors from the PCB of ASS'Y Control Out. 3) Pull up the ASS'Y Control Out. 	  
4	Heat Exchanger	<ol style="list-style-type: none"> 1) Release the refrigerant at first. 2) Loosen fixing screw on both sides. 3) Disassemble the pipes in both inlet and outlet with welding torch. 4) Detach the Heat Exchanger. 5) Loosen 4 bolts fixed to assemble Valve Service with Bracket Valve like the picture on the right side. 	 


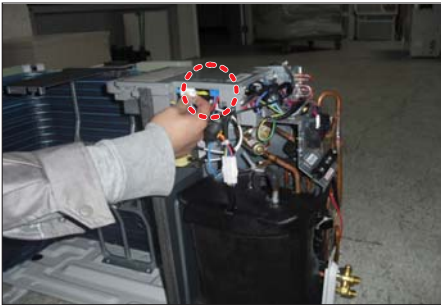
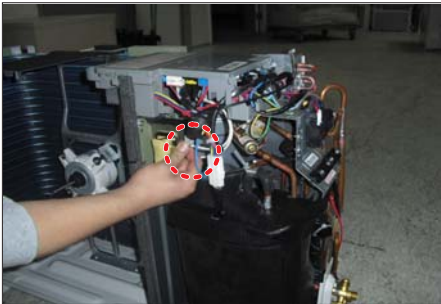

No	Parts	Procedure	Remark
5	Compressor	<p>1) Loosen the fixing nut and detach the Compressor Lead Wire.</p> <p>2) Disassemble the Felt Compressor Sound.</p> <p>3) Loosen the 3 bolts at the bottom of Compressor like the picture on the right side.</p>	  



■ RC026DHXEA/ RC035DHXEA/ RC052DHXEA

No	Parts	Procedure	Remark
1	common work	<p>1) loosen 1 pcs screw of cover control, and detach it.</p> <p>2) loosen 5 pcs screws on both right and left cabinet side edges and to detach the cover-top</p> <p>3) Loosen 7 screws fixed to disassemble cabi-front , and detach it.</p>	    

No	Parts	Procedure	Remark
	common work	<p>4) loosen 7 screws to disassemble the cabi-right ,and detach it.</p> <p>5) loosen 2 screws to disassemble steel-bar.</p> <p>6) loosen 3 screws to disassemble cabi-left.</p>	   

No	Parts	Procedure	Remark
2	fan&motor	<p>1) loosen 1 screw as indication and detached the fan.</p> <p>2) loosen 4 pcs motor screws and disconnect the wire betweenwven assy control out and motor.</p> <p>3) loosen 2 pcs bracket-motor screw and detach it.</p>	  

No	Parts	Procedure	Remark
3	assy control out	1) lossen fixing 1 screw from cover -control 2) detach several connections from assy control out, take out assy control out.	  
4	Heat exchanger	1) Release the refrigerant at first 2) Looosen fixing screw on both side. 3) disassembly the pipes in both inlet and outlet with welding torch. 4) detach the heat exchanger.	

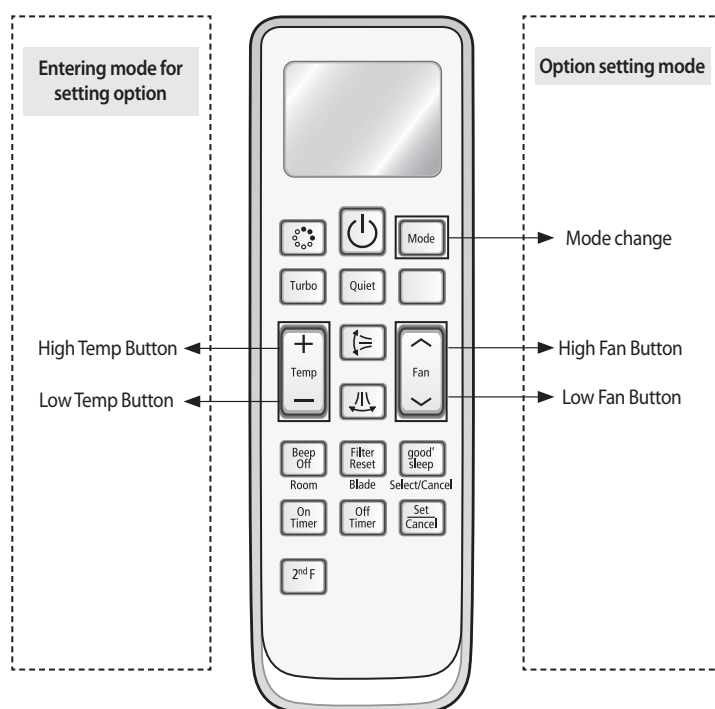
No	Parts	Procedure	Remark
5	compressor	<p>1) disconnect the compressor lead wire .</p> <p>2)disassembly the felt comp sound. loosen the 3 bolts at the bottom of</p>	 

4. Troubleshooting

4-1 Setting an indoor unit address and installation option

- ▶ Set the indoor unit address and installation option with remote controller option.
Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.
- ▶ Please use the proper wireless remote which can set 24 digit option code. Following is the instructions of setting option code with wireless remote of MR-DH00. (MR-AH01 can be used for operating but cannot be used for setting the installation option because only 12 digit option setting is available.)
- ▶ Please refer to the wired remote installation manual for setting with the wired remote.

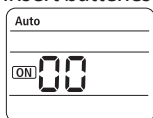
4-1-1 The procedure of setting option



Step 1. Entering mode to set option

1. Remove batteries from the remote controller.
2. Insert batteries and enter the option setting mode while pressing High Temp button and Low Temp button.

3. Check if you have entered the option setting status.



Step 2. The procedure of option setting

After entering the option setting status, select the option as listed below.



Option setting is available from SEG1 to SEG 24

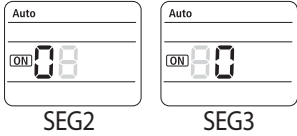

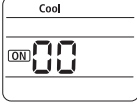
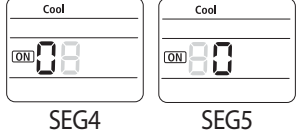

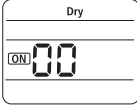
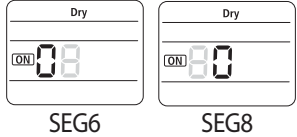

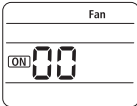
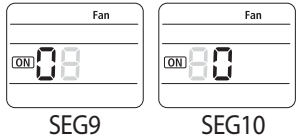

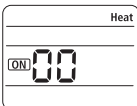
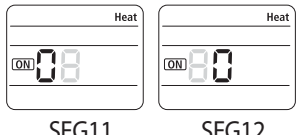

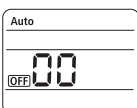
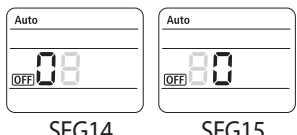
- SEG1, SEG7, SEG13, SEG18 are not need to be set at MR-DH00. They are the page options which were used at the previous other remocos.
- Set the each 2 bit option code in order except page options.

For example: SEG2, 3 → SEG4, 5 → SEG6, 8 → SEG9, 10 → SEG11, 12 → SEG 14, 15 → SEG 16, 17 → SEG 18, 20 → SEG 21, 22 → SEG23, 24.


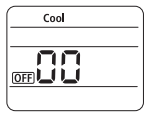
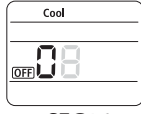
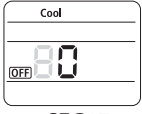

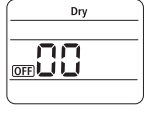
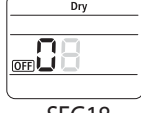


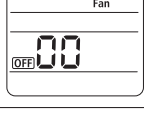
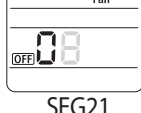
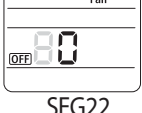

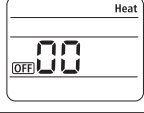
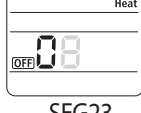
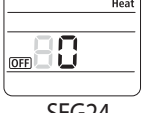
SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
0	X	X	X	X	X	1	X	X	X	X	X
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18	SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
2	X	X	X	X	X	3	X	X	X	X	X

On(SEG1~12)	Off(SEG13~24)
CON 00	OFF 00


4-1-2 The procedure of setting option

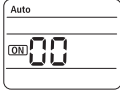
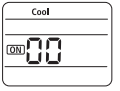
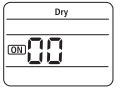
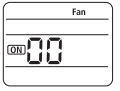
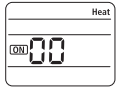



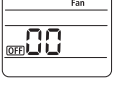

Option setting	Status
<p>1. Setting SEG2, SEG3 option</p> <p>Press Low Fan button(∇) to enter SEG2 value.</p> <p>Press High Fan button(∧) to enter SEG3 value.</p> <p>Each time you press the button, 0 → 8 → ... E → F will be selected in rotation.</p>	 <p>SEG2 SEG3</p>
<p>2. Setting Cool mode</p> <p> Press Mode button to be changed to Cool mode in the ON status.</p>	
<p>3. Setting SEG4, SEG5 option</p> <p>Press Low Fan button(∇) to enter SEG4 value.</p> <p>Press High Fan button(∧) to enter SEG5 value.</p> <p>Each time you press the button, 0 → 8 → ... E → F will be selected in rotation.</p>	 <p>SEG4 SEG5</p>
<p>4. Setting Dry mode</p> <p> Press Mode button to be changed to DRY mode in the ON status.</p>	
<p>5. Setting SEG6, SEG8 option</p> <p>Press Low Fan button(∇) to enter SEG6 value.</p> <p>Press High Fan button(∧) to enter SEG8 value.</p> <p>Each time you press the button, 0 → 8 → ... E → F will be selected in rotation.</p>	 <p>SEG6 SEG8</p>
<p>6. Setting Fan mode</p> <p> Press Mode button to be changed to FAN mode in the ON status.</p>	
<p>7. Setting SEG9, SEG10 option</p> <p>Press Low Fan button(∇) to enter SEG9 value.</p> <p>Press High Fan button(∧) to enter SEG10 value.</p> <p>Each time you press the button, 0 → 8 → ... E → F will be selected in rotation.</p>	 <p>SEG9 SEG10</p>
<p>8. Setting Heat mode</p> <p> Press Mode button to be changed to HEAT mode in the ON status.</p>	
<p>9. Setting SEG11, SEG12 option</p> <p>Press Low Fan button(∇) to enter SEG11 value.</p> <p>Press High Fan button(∧) to enter SEG12 value.</p> <p>Each time you press the button, 0 → 8 → ... E → F will be selected in rotation.</p>	 <p>SEG11 SEG12</p>
<p>10. Setting Auto mode</p> <p> Press Mode button to be changed to AUTO mode in the OFF status.</p>	
<p>11. Setting SEG14, SEG15 option</p> <p>Press Low Fan button(∇) to enter SEG14 value.</p> <p>Press High Fan button(∧) to enter SEG15 value.</p> <p>Each time you press the button, 0 → 8 → ... E → F will be selected in rotation.</p>	 <p>SEG14 SEG15</p>

The procedure of setting option (cont.)


Option setting	Status
12. Setting Cool mode  Press Mode button to be change to Cool mode in the OFF status.	
13. Setting SEG16, SEG17 option Press Low Fan button(∨) to enter SEG16 value. Press High Fan button(∧) to enter SEG17 value. Each time you press the button, 0 → 8 → ... → E → F will be selected in rotation.	<div>   </div> <div>SEG16 SEG17</div>
14. Setting Dry mode  Press Mode button to be change to Dry mode in the OFF status.	
15. Setting SEG18, SEG20 option Press Low Fan button(∨) to enter SEG18 value. Press High Fan button(∧) to enter SEG20 value. Each time you press the button, 0 → 8 → ... → E → F will be selected in rotation.	<div>   </div> <div>SEG18 SEG20</div>
16. Setting Fan mode  Press Mode button to be change to Fan mode in the OFF status.	
17. Setting SEG21, SEG22 option Press Low Fan button(∨) to enter SEG21 value. Press High Fan button(∧) to enter SEG22 value. Each time you press the button, 0 → 8 → ... → E → F will be selected in rotation.	<div>   </div> <div>SEG21 SEG22</div>
18. Setting Heat mode  Press Mode button to be change to HEAT mode in the OFF status.	
19. Setting SEG23, SEG24 mode Press Low Fan button(∨) to enter SEG23 value. Press High Fan button(∧) to enter SEG24 value. Each time you press the button, 0 → 8 → ... → E → F will be selected in rotation.	<div>   </div> <div>SEG23 SEG24</div>

Step 3. Check the option you have set

After setting option, press  button to check whether the option code you input is correct or not.

Option	[SEG2,3]	[SEG4,5]	[SEG6,8]	[SEG9,10]	[SEG11,12]
Remote Controller Display					
Option	[SEG14,15]	[SEG16,17]	[SEG18,20]	[SEG21,22]	[SEG23,24]
Remote Controller Display					

Step 4. Input option

Press operation button  with the direction of remote control for set.
 For the correct option setting, you must input the option twice.

Step 5. Check operation

1. Reset the indoor unit by pressing the RESET button of indoor unit or outdoor unit.
2. Take the batteries out of the remote controller and insert them again and then press the operation button.

4-1-3 Setting an indoor unit address (MAIN/RMC)

1. Check whether power is supplied or not.
- When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
2. The panel(display) should be connected to an indoor unit to receive option.
3. Before installing the indoor unit, assign an address to the indoor unit according to the air conditioning system plan.
4. Assign an indoor unit address by wireless remote controller.
- The initial indoor unit ADDRESS is set as "MAIN : 0, RMC : 0".
- Set Main and RMC Address only the setting is required.
- There is no need to assign the indoor unit Main Address if the outdoor unit is addressing automatically.
The indoor unit Main address will follow the outdoor unit's automatically.
- Assign 12 digit when setting the indoor unit address.
- No need to assign SEG4, 5, 8, 10 which are non applicable. Even though those segments are set, they will be ignored.
- If you set the applicable segments with numbers other than the indicated, the initial setting will be maintained.

Option No. : 0AXXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG1		SEG2		SEG3		SEG4	SEG5	SEG6		
Explanation	PAGE		MODE		Setting Main address		RESERVED	RESERVED	The unit digit of an indoor unit		
Indication and Details	Indication	Details	Indication	Details	Indication	Details			Indication	Details	
	0		A		0	No Main address			0~3	A single digit	
					1	Main address setting mode					
Option	SEG7		SEG8		SEG9		SEG10	SEG11		SEG12	
Explanation	PAGE		RESERVED		Setting RMC address		RESERVED	Group channel(*16)		Group address	
Indication and Details	Indication	Details			Indication	Details		Indication	Details	Indication	Details
	1				0	No RMC address		RMC1	0~2	RMC2	0~F
					1	RMC address setting mode					

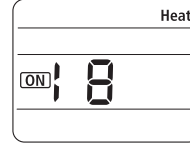
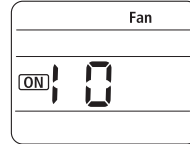
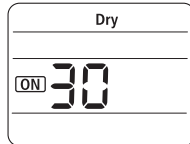
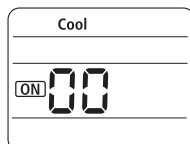
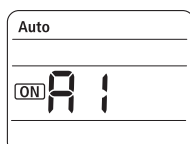


- When "A"~"F" is entered to SEG5~6, the indoor unit MAIN ADDRESS is not changed.
- If you set the SEG 3 as 0, the indoor unit will maintain the previous MAIN ADDRESS even if you input the option value of SEG6.
- If you set the SEG 9 as 0, the indoor unit will maintain previous RMC ADDRESS even if you input the option value of SEG11~12.

Example) If you want to set as "MAIN : 3, CHANNEL : 1, RMC : B",

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	A	1	-	-	3
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	-	1	-	1	B

assign option codes except SEG 1, 7 which are page options.



4-1-4 Setting an indoor unit installation option (suitable for the condition of each installation location)

1. Check whether power is supplied or not.
- When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
2. The panel(display) should be connected to an indoor unit to receive option.
3. Set the installation option according to the installation condition of an air conditioner.
- The default setting of an indoor unit installation option is "02000-100000-200000-300000".
- Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.
- No need to assign SEG3, 6, 9, 10, 11, 16, 21, 22, 23, 24 which are non applicable. Even though those segments are set, they will be ignored.
- If you set the applicable segments with numbers other than the indicated, the initial setting will be maintained.
4. Set the indoor unit option by wireless remote controller.

Option No. : 02XXXX-1XXXXX-2XXXXX-3XXXXX

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6 (Mini 4Way only)	
Explanation	PAGE		MODE		RESERVED		Use of external temperature sensor		Use of central control		RPM setting compensation	
Indication and Details	Indication	Details	Indication	Details			Indication	Details	Indication	Details	0. Not used 1. High ceiling mode 2. High ceiling kit 3. Low noise operation mode	
	0		2				0	Disuse	0	Disuse		
Option	SEG7		SEG8		SEG9		SEG10		SEG11		SEG12	
Explanation	PAGE		Use of drain pump		RESERVED		RESERVED		RESERVED		Master / Slave	
Indication and Details	Indication	Details	Indication	Details							Indication	Details
	1		0	Disuse							0	slave
			1	Use							1	master
			2	Use + 3minute delay								
Option	SEG13		SEG14		SEG15		SEG16		SEG17		SEG18	
Explanation	PAGE		Use of external control		Setting the output of external control		S-Plasma ion		Buzzer control		Number of hours using filter	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	2		0	Disuse	0	Thermo on	0	Disuse	0	Use of buzzer	2	1000 Hour
			1	ON/OFF Control	1	Operation on	1	Use	1	Non use of buzzer	6	2000 Hour
			2	OFF Control								
			3	WINDOR ON/OFF								

Option	SEG19		SEG20		SEG21		SEG22	SEG23 (Mini 4 Way only)		SEG24
Explanation	PAGE		Individual control of a remote controller		0	Disuse	RESERVED	Motion detect sensor		RESERVED
Indication and Details	Indication	Details	Indication	Details				Indication	Details	
	3	0 or 1	Indoor 1	0.No Use (Factory Setting)						
		2	Indoor 2	1.Standard Mode/Auto Set OFF30 Min.						
		3	Indoor 3	2.Standard Mode/Auto Set OFF60 Min.						
		4	Indoor 4	3.Standard Mode/Auto Set OFF 120 Min.						
1	2℃	4.Standard Mode/Auto Set OFF 180 Min.								
2	5℃	5.Premium Mode/ Auto Set OFF30 Min.								

► If you input a number other than 0~4 on the individual control of the indoor unit(SEG 20), the indoor is set as "Indoor 1".

Example) If you want to set as "Exterior temperature sensor : USE, External control : USE, Number of hours using filter : 2000hr",

SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
0	2	-	1	0	-
SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
1	0	-	-	-	0
SEG13	SEG14	SEG15	SEG16	SEG17	SEG18
2	1	0	-	0	6
SEG19	SEG20	SEG21	SEG22	SEG23	SEG24
3	0	-	-	-	-

assign option codes except SEG 1, 7, 13, 19 which are page options.

4-1-5 Changing a particular option

You can change each digit of set option.

Option	SEG1		SEG2		SEG3		SEG4		SEG5		SEG6	
Explanation	PAGE		MODE		The option mode you want to change		The tens' digit of an option SEG you will change		The unit digit of an option SEG you will change		The changed value	
Indication and Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details	Indication	Details
	0		D		Option mode	0~F	Tens' digit of SEG	0~9	Unit digit of SEG	0~9	The changed value	0~F



NOTE

- When changing a digit of an indoor unit address setting option, set the SEG3 as 'A'.
- When changing a digit of indoor unit installation option, set the SEG3 as '2'.

Ex) When setting the 'buzzer control' into disuse status.

Option	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6
Explanation	PAGE	MODE	The option mode you want to change	The tens' digit of an option SEG you will change	The unit digit of an option SEG you will change	The changed value
Indication	0	D	2	1	7	1

4-1-6 Option code for each model

Model	OPTION CODE
ACN026NDEHA	015077-1660F8-271A21-370000
ACN035NDEHA	015077-166219-272328-370000
ACN052NDEHA	015077-17625D-273437-370040
ACN060NDEHA	015077-18626E-273C46-370040
ACN071NDEHA	015077-156391-274750-370040
NS0261DXEA	017057-1860F8-271A23-370010
NS0351DXEA	017057-17624D-272328-370010

4-2 Items to check before diagnostics

4-2-1 Four directions cassette type

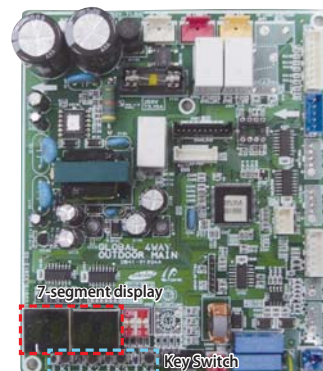
Error Mode				Cause	Measures	Product operation with error			Diagnosis method
Operation	Defrost	Timer	Filter			Outdoor heat exchanger compressor	Outdoor heat exchanger fan	Indoor heat exchanger fan	
●	X	X	X	Power reset	-	operation-off	operation-off	operation-off	-
X	●	X	X	Error of room temperature sensor in the indoor unit (Open/Short)	<ul style="list-style-type: none">• Check indoor temperature sensor connection.• Check indoor temperature sensor's resistance value to see if it's short/open.	operation-off	operation-off	operation-off	page 4-17
●	●	X	X	Error of heat exchanger IN/OUT sensor in the indoor unit (Open/Short)	<ul style="list-style-type: none">• Check EVA IN/OUT sensor connection.• Check EVA IN/OUT sensor's resistance value to see if it's short/open.	operation-off	operation-off	operation-off	page 4-18
X	X	●	X	Error of fan motor in the indoor unit	<ul style="list-style-type: none">• Check the connection of motor connector• Check the speed of the motor fan	operation-off	operation-off	operation-off	page 4-19
●	X	●	X	Error of the outdoor temperature sensor Error of the condensor temperature sensor Error of the discharge temperature sensor	<ul style="list-style-type: none">• Check indoor temperature sensor connection.• Check indoor temperature sensor's resistance value to see if it's short/open.	operation-off	operation-off	operation-off	-
X	●	●	X	No communication for 2 minutes between indoor and outdoor unit (communication error for more than 2 minutes)	<ul style="list-style-type: none">• Check connection between indoor and outdoor heat exchangers' communication cables	operation-off	operation-off	operation-off	page 4-20
X	●	●	●	Error of outdoor unit	<ul style="list-style-type: none">• Check error occurred with outdoor heat exchanger.	operation-off	operation-off	operation-off	-
X	X	●	●	Detection of the float switch	<ul style="list-style-type: none">• Check float switch connection.• Check whether the drain has been filled with water.	operation-off	operation-off	operation-off	page 4-21
●	●	●	X	EEPROM error	<ul style="list-style-type: none">• Check if there is damage with EEPROM component.	operation-off	operation-off	operation-off	page 4-22
●	●	●	●	EEPROM option error	<ul style="list-style-type: none">• Check the indoor model to set the options.• Inspection for match between indoor and outdoor machine models	operation-off	operation-off	operation-off	-
●	X	X	●	MDS-kit error	<ul style="list-style-type: none">- Check the wire connection- Check the MDS-KIT- Check the indoor PBA	operation-on	operation-on	operation-on	page 4-49

○ : On ● : Blink X : Off

4-2-2 Test run mode and View mode

■ Display Option Key

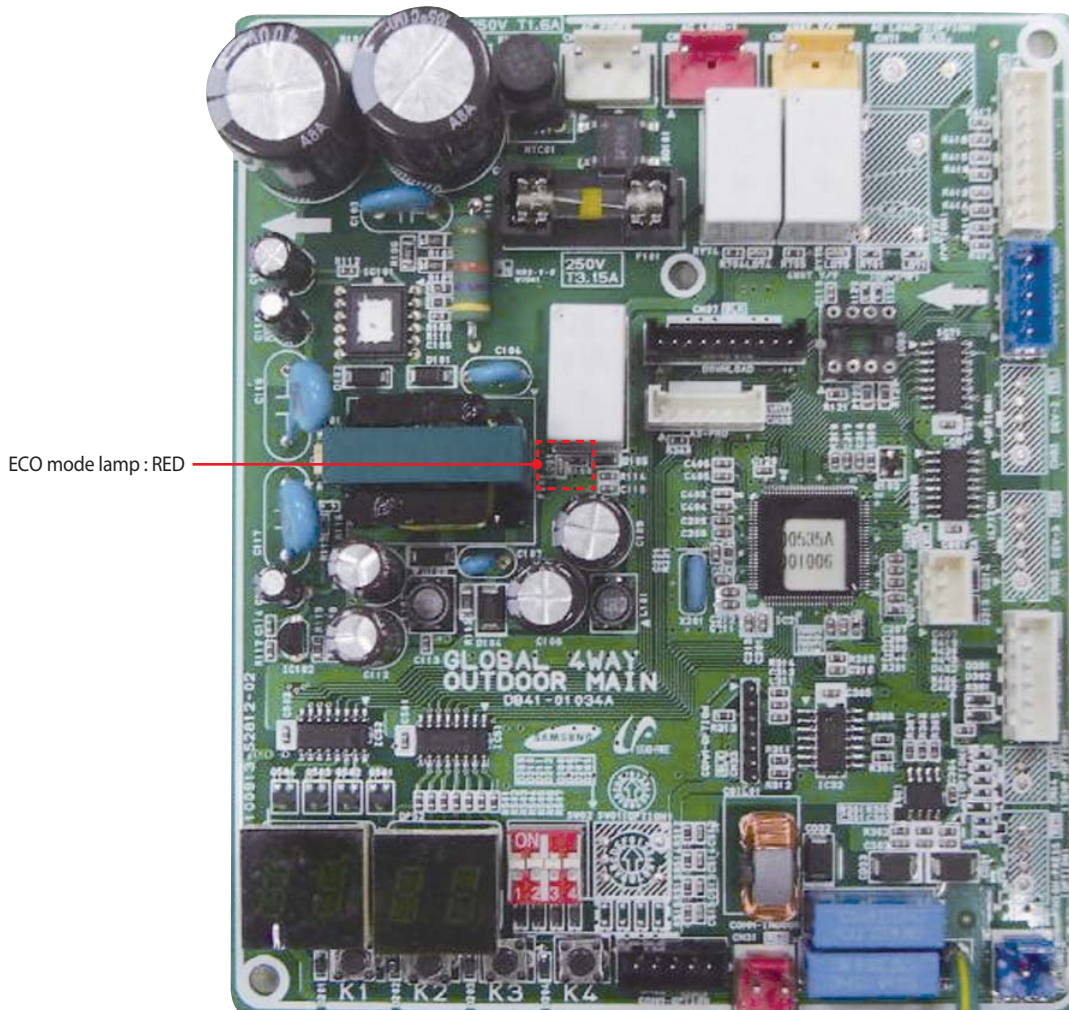
KEY	KEY operation	7-segment display
K1	Press once : Heating test run	" " " " " " " "BLANK" "BLANK"
	Press twice : Defrost test run	" " " " " " " "BLANK" "BLANK"
K2	Press once : Cooling test run	" " " " " " " "BLANK" "BLANK"
K3	Reset	
K4	View mode	Refer to View mode display



■ VIEW mode display

Number of press	Display contents	Display				Units
		Segment 1	Segment 2	Segment 3	Segment 4	
1	Order frequency	1	Three digits	Two digits	One digit	Hz
2	Current frequency	2	Three digits	Two digits	One digit	Hz
3	Number of indoor heat exchangers	3	Three digits	Two digits	One digit	Hz
4	Out sensor	4	Two digits	One digit	First decimal	°C
5	Discharge sensor	5	Two digits	One digit	First decimal	°C
6	OLP sensor	6	Two digits	One digit	First decimal	°C
7	Cond sensor	7	Two digits	One digit	First decimal	°C
8	Current	8	Two digits	One digit	First decimal	C
9	Fan RPM	9	Three digits	Two digits	One digit	rpm
10	Target discharge temperature	A	Three digits	Two digits	One digit	°C
11	EEV	B	Three digits	Two digits	One digit	step
12	Total indoor heat exchanger capacity	C	Two digits	One digit	First decimal	kW
13	Protection control	D	0 : air conditioning 1 : heating	Protection control 0 : no protection control 1 : freezing 2 : non-stop defrosting 3 : over-load 4 : discharge	Frequency state 0 : Normal 1 : Hold 2 : Down 3 : Up_limit 4 : Sown_limit	-
14	Group address of indoor heat exchanger	E	Three digits	Two digits	One digit	-
15	S/W check	F	-	-	-	-

4-2-3 ECO mode(Power save)




















Mode	Display				ECO mode lamp
	Segment 1	Segment 2	Segment 3	Segment 4	RED color
ECO mode	"BLANK"	"BLANK"	"BLANK"	"BLANK"	On
Exit ECO mode	Press K3 to exit				Off

4-2-4 1 way cassette type

■ Error detection and reoperation















1. If an error occurs during operation, the LED flashes to indicate that there is a problem then all operations stop except LED.
2. When resuming operation with remote controller and switch, it determines error mode after normal operation.

■ LED lamp display when error is detected

Error LED lamp Display					Cause	Actions to take
						
Operation (Green)	Defrost (Red)					
X	X		X	X	<ul style="list-style-type: none">• Breakaway from the room temperature sensor connector• Cut the room temperature sensor wire	<ul style="list-style-type: none">• Check the connection between the room temperature wire and the main PCB of the indoor unit• Check the pattern of the room temperature sensor part of the main PCB of the indoor unit and if parts are open or shorted
	X		X	X	<ul style="list-style-type: none">• Disjoint of the in/out sensor connector of the indoor heat exchanger• Cut the In/out sensor wire of the indoor heat exchanger	<ul style="list-style-type: none">• Check the connection between the main PB of the indoor unit and heat exchange sensor wire.• Check the pattern of the heat exchanger of the main PCB of the indoor unit and if parts are open or shorted
X	X	X		X	<ul style="list-style-type: none">• Indoor fan motor is non-operative• Indoor fan motor is operating slowly• Indoor fan motor operates at an excessive speed.	<ul style="list-style-type: none">• Check if a motor connector has been dismantled (CN44. CN73)• Check the fastening of the motor fan
	X	X		X	<ul style="list-style-type: none">• Disjointed or cut off of outdoor temperature sensor• Disjointed or cut off of the outdoor sensor of heat exchanger (COND)• Dismounted/ cut off of the outdoor discharge sensor	<ul style="list-style-type: none">• Check the PCB display window of the outdoor unit then refer to a breakdown diagnosis
X	X			X	<ul style="list-style-type: none">• Communication error between indoor units and outdoor units for more than 2 minutes• 3 min. error of the outdoor unit tracking (multi-product specification)• Inconsistency between the number of installed units and communication units. (multi-product specification)	<ul style="list-style-type: none">• Check the connection between indoor and outdoor units• Check the settings for indoor Main/ RMC address switch
X	X				<ul style="list-style-type: none">• The detection of secondary high temperature at COND (outdoor heat exchanger)• The detection of secondary high temperature at discharge• Reverse detection error	<ul style="list-style-type: none">• Check the PCB display window of the outdoor unit then refer to breakdown diagnosis
X	X	X			<ul style="list-style-type: none">• Deviation of float sensor connector• Cut of float sensor wire	<ul style="list-style-type: none">• Check the connection between main PCB and float sensor in the indoor unit




























○:Turn on ●:Flashing X:Turn off

■ LED lamp display when error is detected(cont.)

Error LED lamp Display					Cause	Actions to take
						
Operation (Green)	Defrost (Red)					
X	X		X		• Option setup error on peripherals	• Check the setting of DIP switch (SW05, SW06, SW07)
	X			X	• EEPROM part defect • EEPROM circuit defect	• Check non-delivery/ cool delivery/ non-insertion of IC51 Part Pin • Check non-delivery/ cool delivery/ non-insertion of IC51 peripheral circuit components
					• EEPROM option none input/erroneous input	• Re-input of option code for indoor unit (refer to page 4-11)

○:Turn on ●:Flashing X:Turn off

■ LED lamp display when error is detected(cont.)

Error LED lamp Display					Product operation status in case of error			Diagnosis Method
					Indoor unit Fan	Outdoor unit Fan	Outdoor unit Compressor	
Operation (Green)	Defrost (Red)							
X	X		X	X	Operation-Off	Operation-Off	Operation-Off	Page 4-21
	X		X	X	Operation-Off	Operation-Off	Operation-Off	Page 4-22
X	X	X		X	Operation-Off	Operation-Off	Operation-Off	Page 4-23
	X	X		X	Operation-Off	Operation-Off	Operation-Off	Page 4-32
X	X			X	Operation-Off	Operation-Off	Operation-Off	Page 4-24
X	X				Operation-Off	Operation-Off	Operation-Off	Page 4-34
X	X	X			Operation-Off	Operation-Off	Operation-Off	Page 4-25
X	X		X		Operation-Off	Operation-Off	Operation-Off	-
	X			X	Operation-Off	Operation-Off	Operation-Off	Page 4-26
					Operation-Off	Operation-Off	Operation-Off	Page 4-11


○:Turn on ●:Flashing X:Turn off

4-2-5 Troubleshooting for outdoor unit

If an error occurs during the operation, it is displayed on the outdoor unit PCB LED, both MAIN PCB and INVERTER PCB.

No.	Error Code	Meaning	Remarks
1	E201	Unit quantity miss matching between indoor and outdoor.	Check indoor quantity setting in outdoor (Refer to page 17.)
2	E202	Abnormal state, no communication between Indoor and Outdoor Main PCB	Check electrical connection and setting
3	E203	1min. Time out of communication error(Main↔ Inverter)	Check electrical connection and setting
4	E221	Outdoor temp sensor error	Check Outdoor sensor Open/Short
5	E231	Cond. temp sensor error	Check Cond. sensor Open/Short
6	E251	Discharge temp sensor error	Check Discharge sensor Open/Short
7	E320	OLP Sensor Error	Check OLP sensor Open/Short
8	E403	Detection of Outdoor Freezing when Comp. Stop	Check Outdoor Cond.
9	E404	Protection of Outdoor Overload when Comp. Stop	Check Comp. when it start
10	E416	Discharge temperature of a compressor in an outdoor unit is overheated.	
11	E440	Heating operation is not available since the outdoor air temperature is over 30°C.	Heating
	E441	Cooling operation is not available since the outdoor air temperature is lower than -5°C.	Cooling
12	E458	Outdoor unit BLDC Fan 1 or Fan 2 error	FAN1 error
	E475		FAN2 error
13	E461	Comp. Starting error	
14	E462	Primary Current Trip error	
15	E463	Over current trip / PFC over current error	Check OLP sensor
16	E464	IPM(IGBT Module) Over Current(O.C)	
17	E465	Comp. Over load error	
18	E466	DC-Link voltage under/over error	Check AC Power or DC_Link voltage
19	E467	Comp. wire missing error	Check Comp. wire
20	E468	Current sensor error	Check Outdoor Inverter PBA
21	E471	Outdoor EEPROM error	Check Outdoor EEPROM date
22	E474	IPM(IGBT Module) or PFCM Temperature sensor Error	Check Outdoor Inverter PBA
23	E484	PFC Overload Error	Check Outdoor Inverter PBA
24	E500	IPM is over heated.	Check Outdoor Inverter PBA
25	E554	GAS Leak error	Check indoor and outdoor unit model
26	E556	Capacity miss match between indoor and outdoor	Check indoor and outdoor unit model

4-2-6 Wired remote controller

- If an error occurs, () icon will be displayed on the wired remote controller.
- Press the Test button to see the error code.

Error mode	Contents	Measure	Product operation in error condition	Error type
			Outdoor unit/ Compressor/Indoor unit	
101	Indoor unit communication error	Check the communication cable of indoor unit. Check the DC output voltage at the communication terminal	Operation Off	Communication error
102	Indoor unit/outdoor unit communication time-out error: errors in more than 6 packets	Check the outdoor communication cable connection. Check DC output voltage and the communication terminal	Operation Off	Communication error
121	Indoor temperature sensor (open/short error)	Check indoor unit room temperature sensor. Check indoor unit PCB connector CN41 (White)	Operation Off	Indoor sensor error
122	Indoor unit Eva In sensor (Open/Short)	Check indoor unit pipe sensor. Check indoor PCB connector CN41(White)	Operation Off	Indoor sensor error
128	Indoor unit Eva In sensor disconnection	Check the disconnection of indoor unit pipe sensor	Operation Off	Indoor sensor error
143	Remocon Option for MDS is set for ON, but MDS kit is disconnected or the signals for sensors are abnormal.	Check the wire connection Check the MDS kit Check the main PBA	Normal operation (without MDS kit)	MDS kit Error
153	Indoor floating switch secondary detection	Check indoor unit float sensor. Check indoor PCB connector CN5 (black)	Operation Off	Self diagnostic error
202	Indoor/outdoor communication error (1 min)	Check the communication connection between indoor and outdoor units. Check the power line and communication cable connection status	Operation Off	Communication error
203	Communication error between indoor/outdoor INV↔MAIN MICOM (1 min)	Check MAIN MICOM Check INVERTER MICOM	-	Communication error
221	Outdoor temperature sensor error	Check sensor connection status Check sensor location Check sensor resistance	Operation Off	Outdoor sensor error
237	COND temperature sensor error	Check sensor connection status Check sensor location Check sensor resistance	Operation Off	Outdoor sensor error
251	[Inverter] Emission temperature sensor error	Check sensor connection status Check sensor location Check sensor resistance	Operation Off	Outdoor sensor error
416	Emission temperature excessively high	No error (DISCHARGE temperature control)	-	Outdoor unit protection control error
440	Heating operation blocked	Check the operation setting state Check temperature sensor	Operation Off	Self diagnostic error
441	Cooling operation blocked	Check the operation setting state Check temperature sensor	Operation Off	Self diagnostic error
458	Outdoor fan 1 error	Check input power connection status Check the connection status between the motor and outdoor unit PCB Check indoor/outdoor fuse	Operation Off	Self diagnostic error
461	[Inverter] Compressor startup error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
462	[Inverter] Total current error/PFC over current error	Check the input power Check the coolant charging status Check the normal operation of outdoor fan	Operation Off	Outdoor unit protection control error

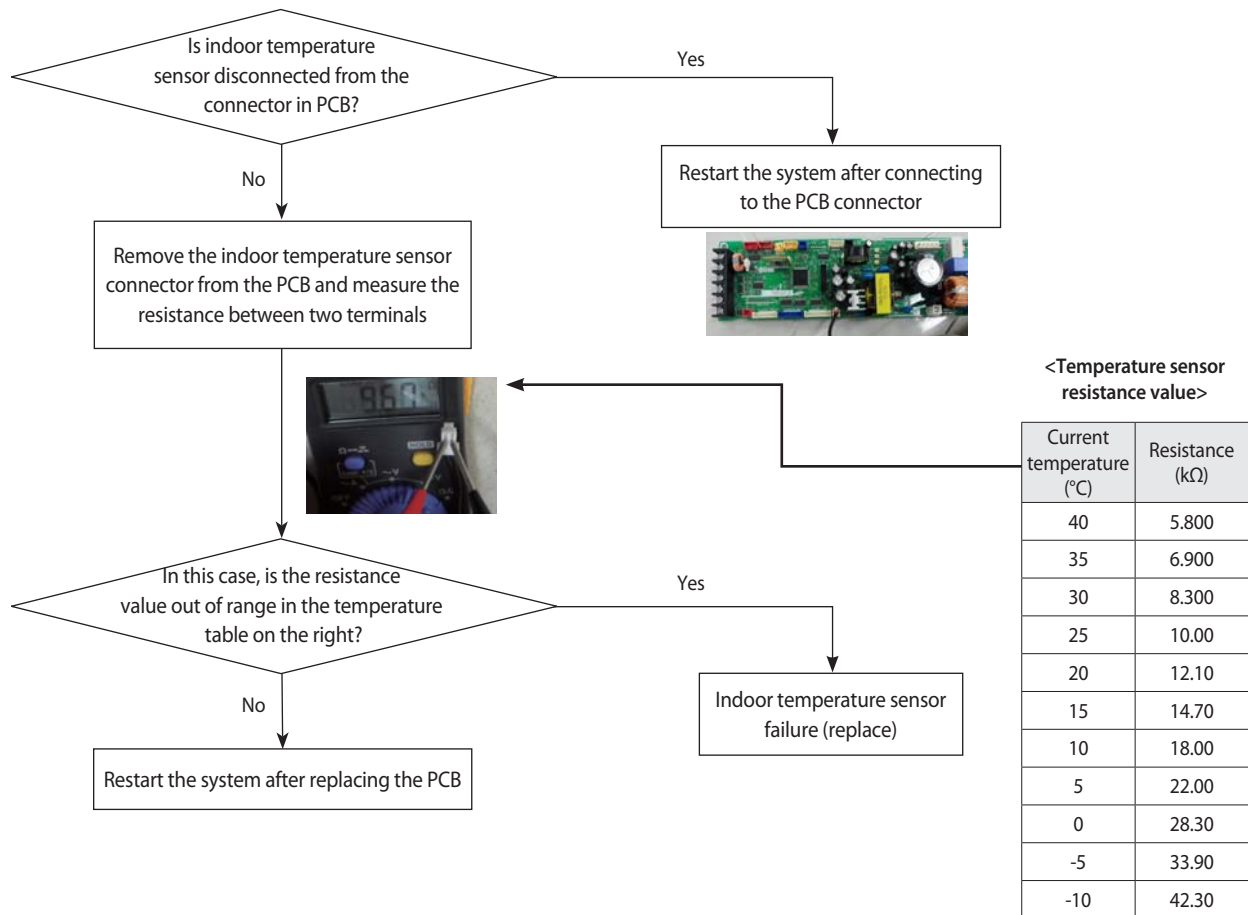
Wired remote controller (cont.)

Error mode	Contents	Measure	Product operation in error condition	Error type
			Outdoor unit/ Compressor/Indoor unit	
464	[Inverter] IPM over current error	Check coolant charging Check the compressor connection status and normal operation Check the obstacles around the indoor and outdoor units Check whether the outdoor unit service valve is open Check whether the indoor/outdoor installation pipe/wiring are correct	Operation Off	Outdoor unit protection control error
465	Compressor V limit error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
466	DC LINK over/low voltage error	Check input power Check AC power connection	Restart in 3 minutes	Outdoor unit protection control error
467	[Inverter] Compressor rotation error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
468	[Inverter] Current sensor error	Check EEPROM DATA Check the normal operation of PCB	Operation Off	Outdoor unit protection control error
469	[Inverter] DC LINK voltage sensor error	Check the input power connection Check the status of RY21 and R200 in the INVERTER PCB	Operation Off	Outdoor unit protection control error
471	[Inverter] OTP error	Check EEPROM DATA Check the normal operation of PCB	Operation Off	Outdoor unit protection control error
472	AC ZERO CROSSING SIGNAL OUT error	Check the input power status	Operation Off	Outdoor unit protection control error
473	Compressor LOCK error	Check the compressor connection status Check the resistance between difference phases of the compressor	Operation Off	Outdoor unit protection control error
475	Outdoor fan 2 error	Check the input power connection status Check the connection status of the motor and the outdoor unit PCB Check the indoor/outdoor unit fuse	Operation Off	Self diagnostic error
554	Gas leak error	Check the coolant charging status Check the indoor EVA sensor Check if the outdoor unit service value is open Check that the indoor/outdoor installation pipe/wiring are correct	Operation Off	Self diagnostic error
556	Capacities not matched	Check the option code of the indoor unit	Operation Off	Outdoor unit protection control error
601	Communication error between the indoor unit and wired remote controller	Check the connection wire between the indoor unit and the wired remote controller	Normal operation	Wired remote controller error
602	Communication error between the Master and Slave wired remote controllers	Check the option switch for defining the Master and Slave (only one Master and one Slave can exist)	Normal operation	Wired remote controller error
606	COM1/COM2 cross installation error	Check that wired remote controller is connected to the COM2 terminal of the indoor unit	Normal operation	Wired remote controller error
8EA	Wired remote controller COM2 option setting error	Check that Com1, Com2 setting DIP switch is set to Com2	Normal operation	Wired remote controller error

4-3 Troubleshooting by symptoms

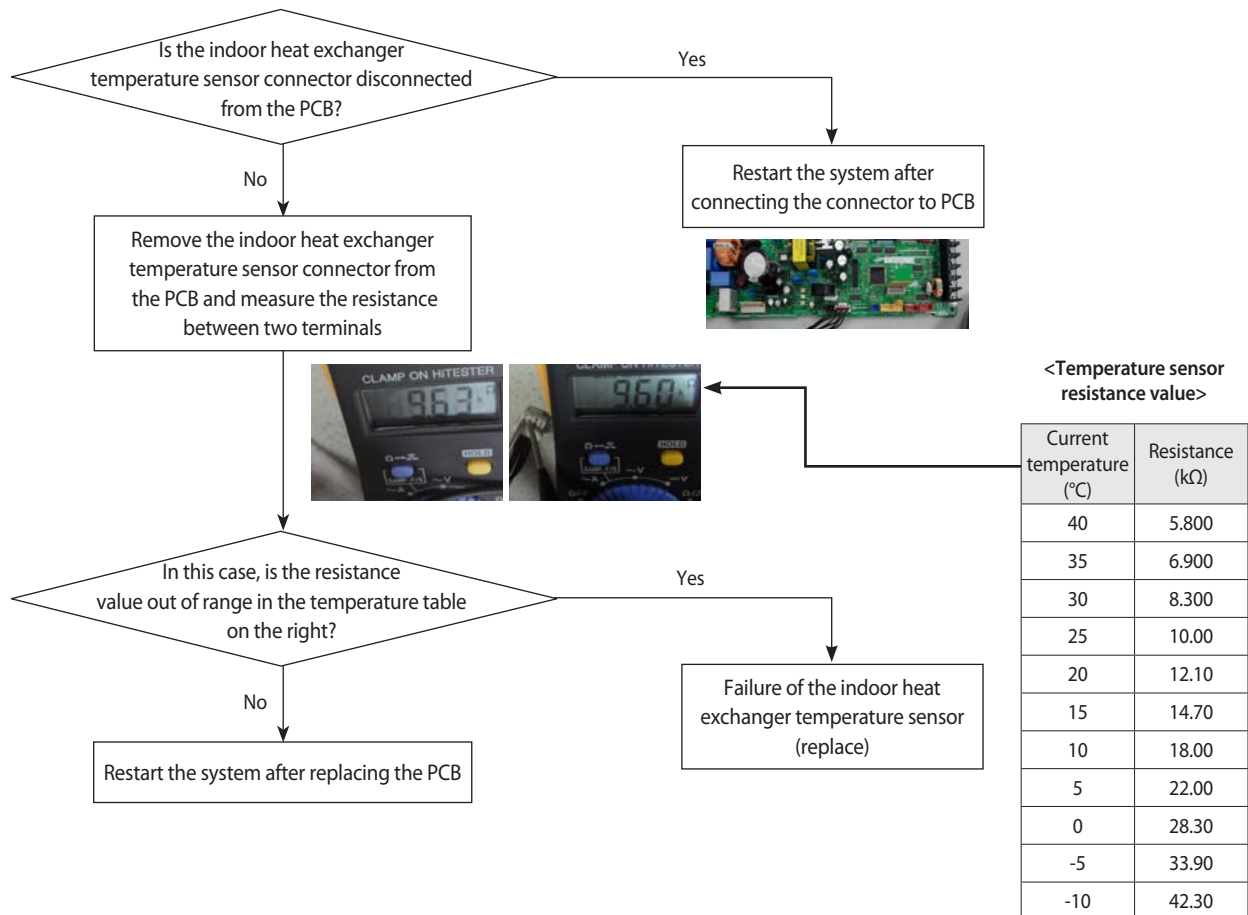
4-3-1 Indoor temperature sensor (open/short)

Indoor unit display	X (Operation) ● (Defrost) X (Timer) X (Filter)
Symptom	In case of open or short circuit of indoor temperature sensor
Failure	Short or leakage of the corresponding sensor



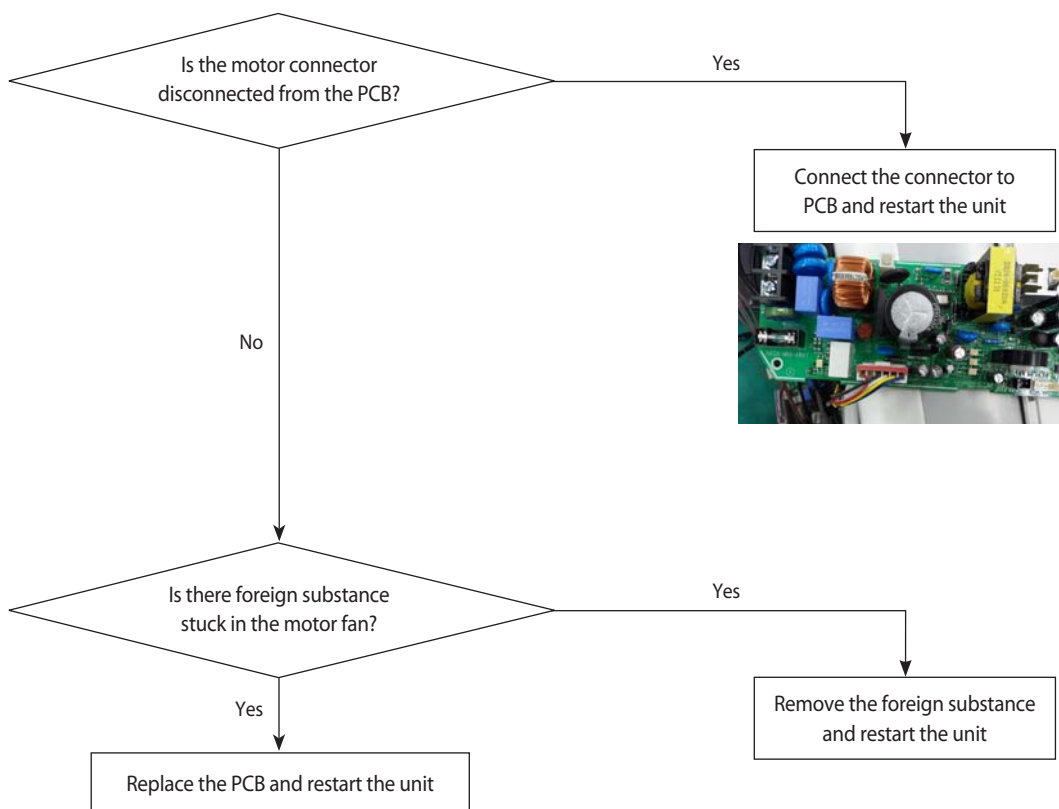
4-3-2 Indoor heat exchanger temperature sensor (open/short)

Indoor unit display	● (Operation) ● (Defrost) X (Timer) X (Filter)
Symptom	Short or open circuit of indoor heat exchanger temperature sensor
Failure	Short or open circuit in the corresponding sensor



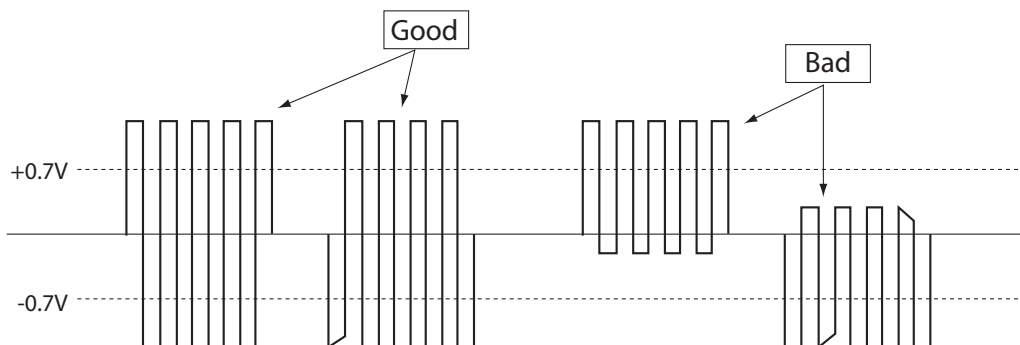
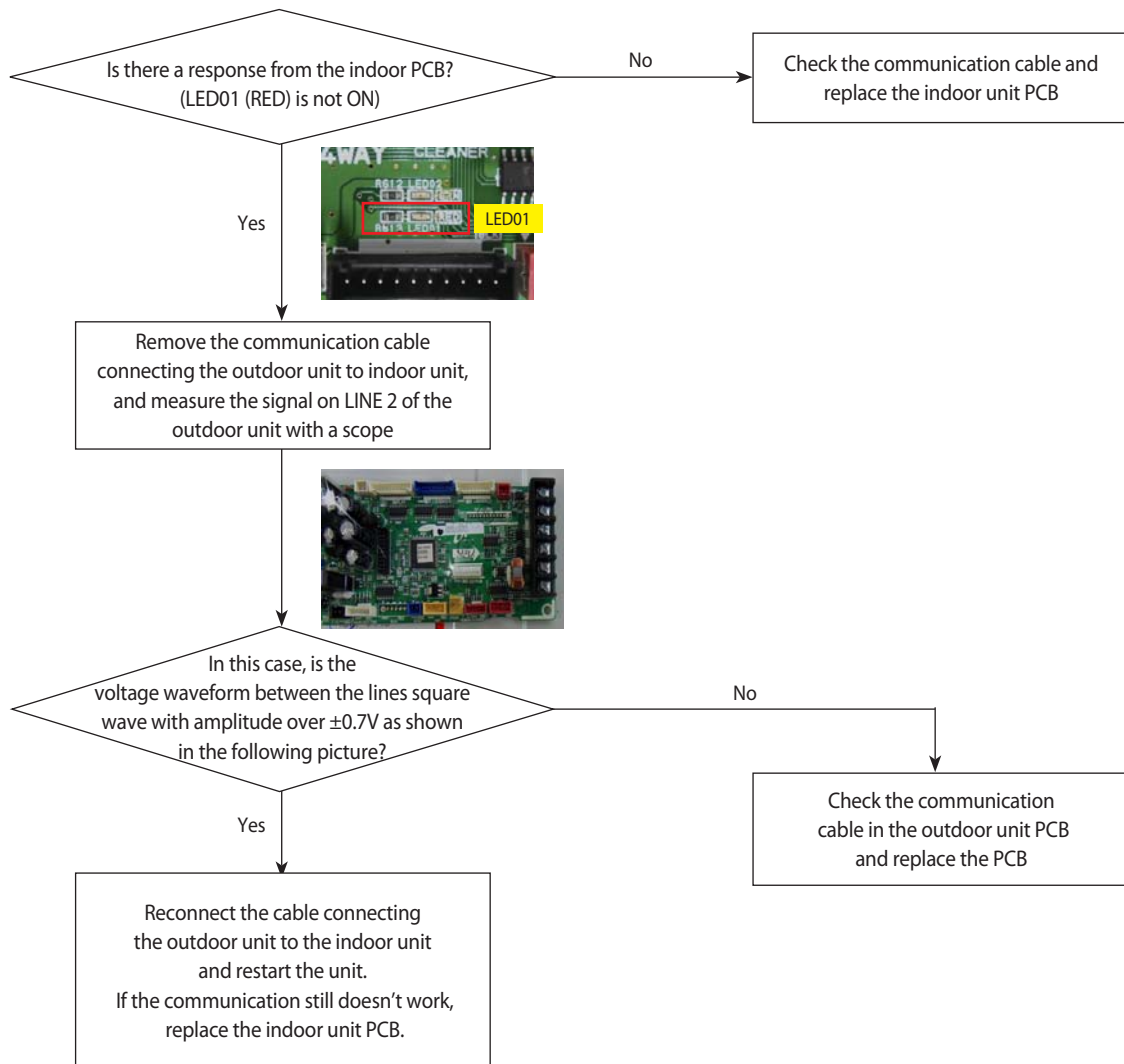
4-3-3 Indoor FAN error

Indoor unit display	X (Operation) X (Defrost) ● (Timer) X (Filter)
Symptom	Indoor unit fan does not run /Runs at excessive high speed and stops
Failure	Check if the motor connector is disconnected/ check the motor fan assembly status



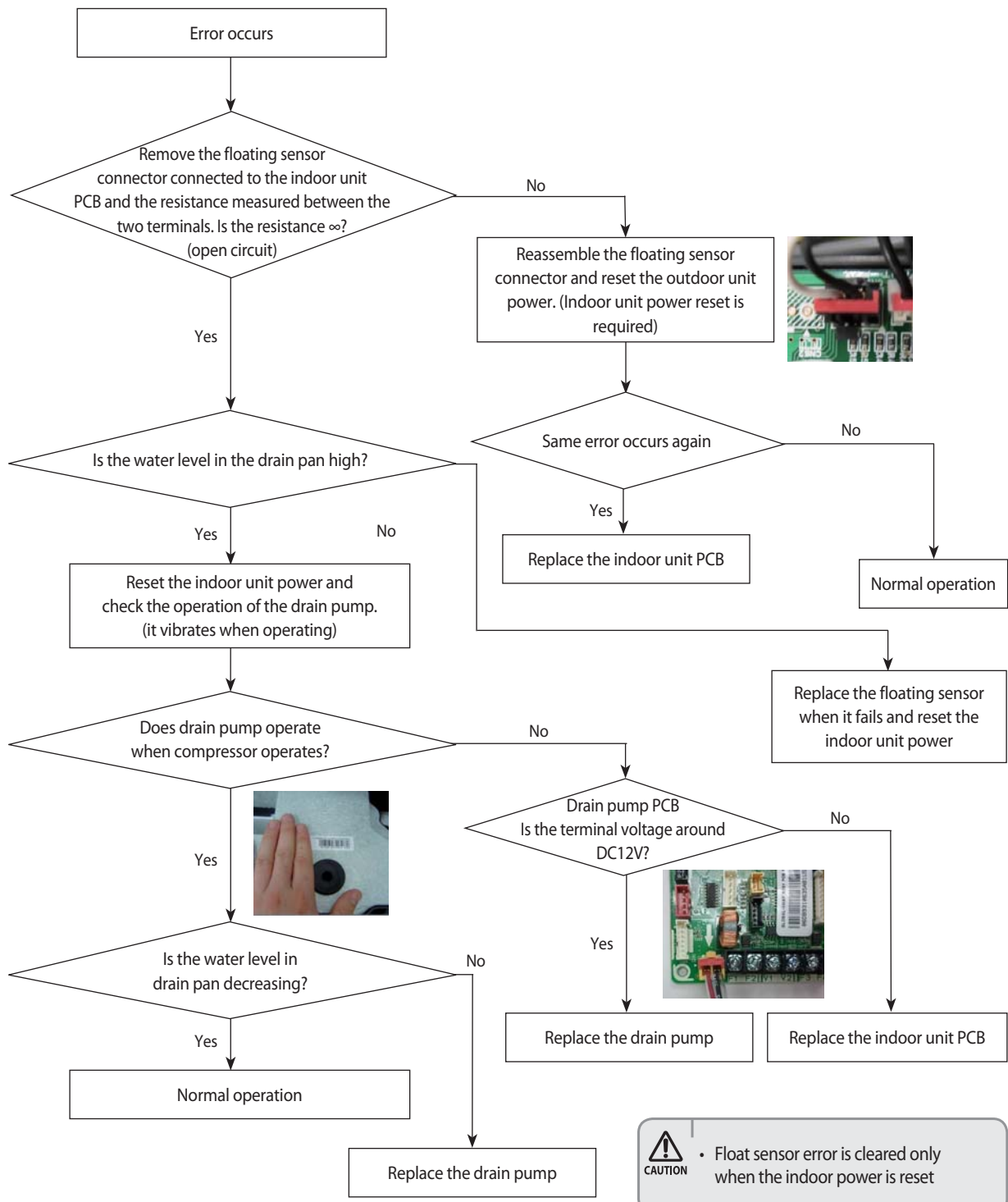
4-3-4 Communication error after finishing Tracking

Indoor unit display	X (Operation) (Defrost) (Timer) X (Filter)
Symptom	Communication error between the indoor and outdoor unit for two minutes
Failure	Communication error between the indoor unit and outdoor unit



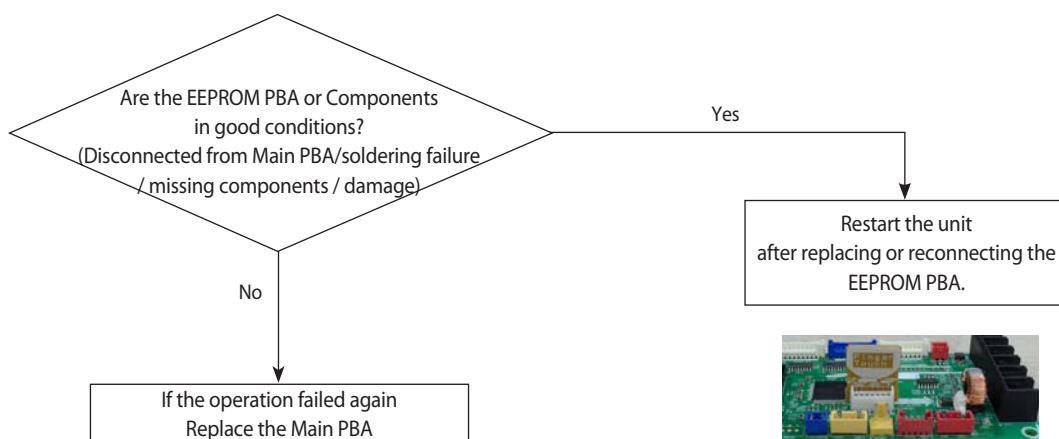
4-3-5 Indoor unit float sensor error

Indoor unit display	X (Operation) X (Defrost) ● (Timer) ● (Filter)
Symptom	The indoor unit floating sensor is open and that state is maintained for more than one minute
Failure	Increase in the drain pan water level due to failure of the indoor unit drain pump, or float sensor failure



4-3-6 EEPROM circuit failure

Indoor unit display	● (Operation) ● (Defrost) ● (Timer) X (Filter)
Symptom	EEPROM circuit failure
Failure	EEPROM component failure, EEPROM circuit parts missing/damaged/soldering failure

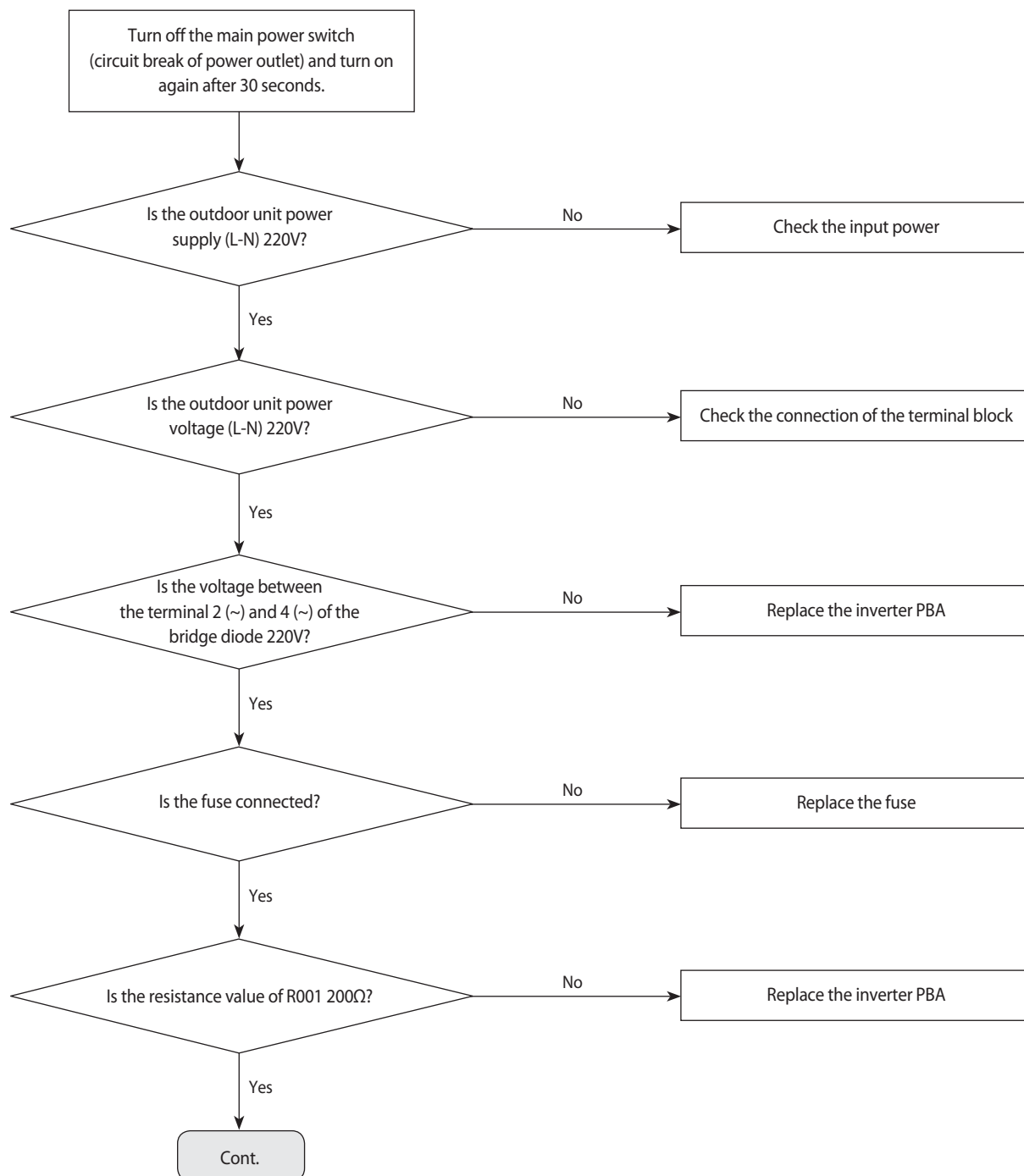


4-3-7 Outdoor unit is not powered on – Initial diagnosis

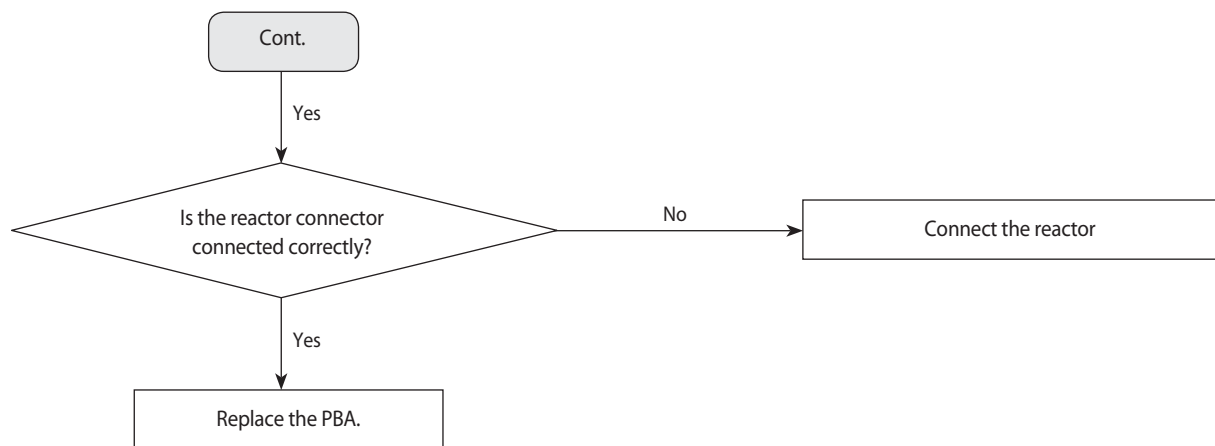
1. Check items

- 1) Is the power supply voltage 220V?
- 2) Is the AC power connected correctly?
- 3) Are the LEDs in the main PCB and inverter PCB of the outdoor unit ON?
- 4) Is the input power voltage of the indoor unit 220V?
- 5) Is the wired remote controller connected correctly?

2. Check procedure



Outdoor unit is not powered on – Initial diagnosis (cont.)

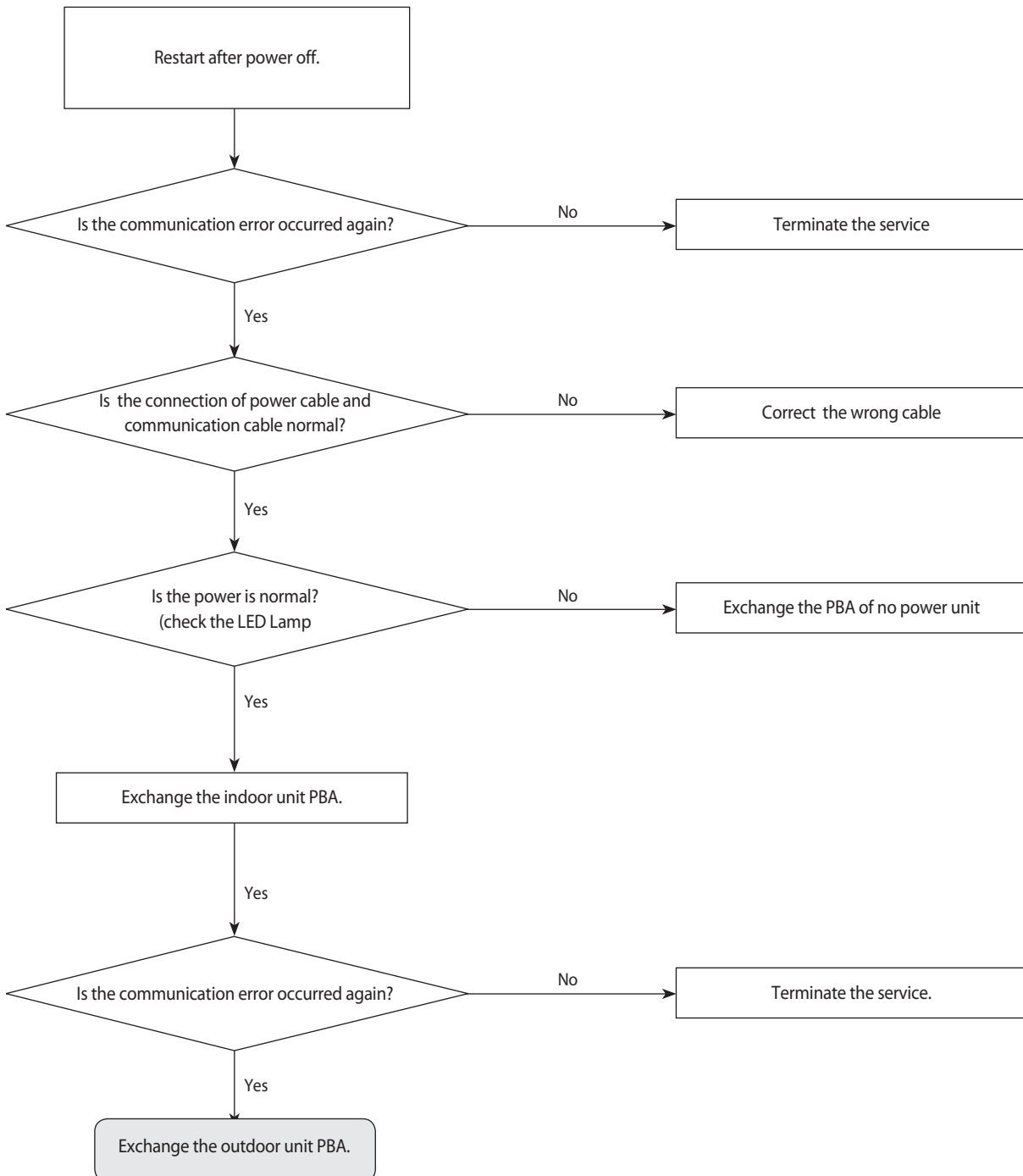


4-4-1 Communication error

1. Checklist :

- 1) Is the cable between the indoor unit and outdoor unit connected correctly?
- 2) Isn't the power cable and communication cable cross?

2. Troubleshooting procedure

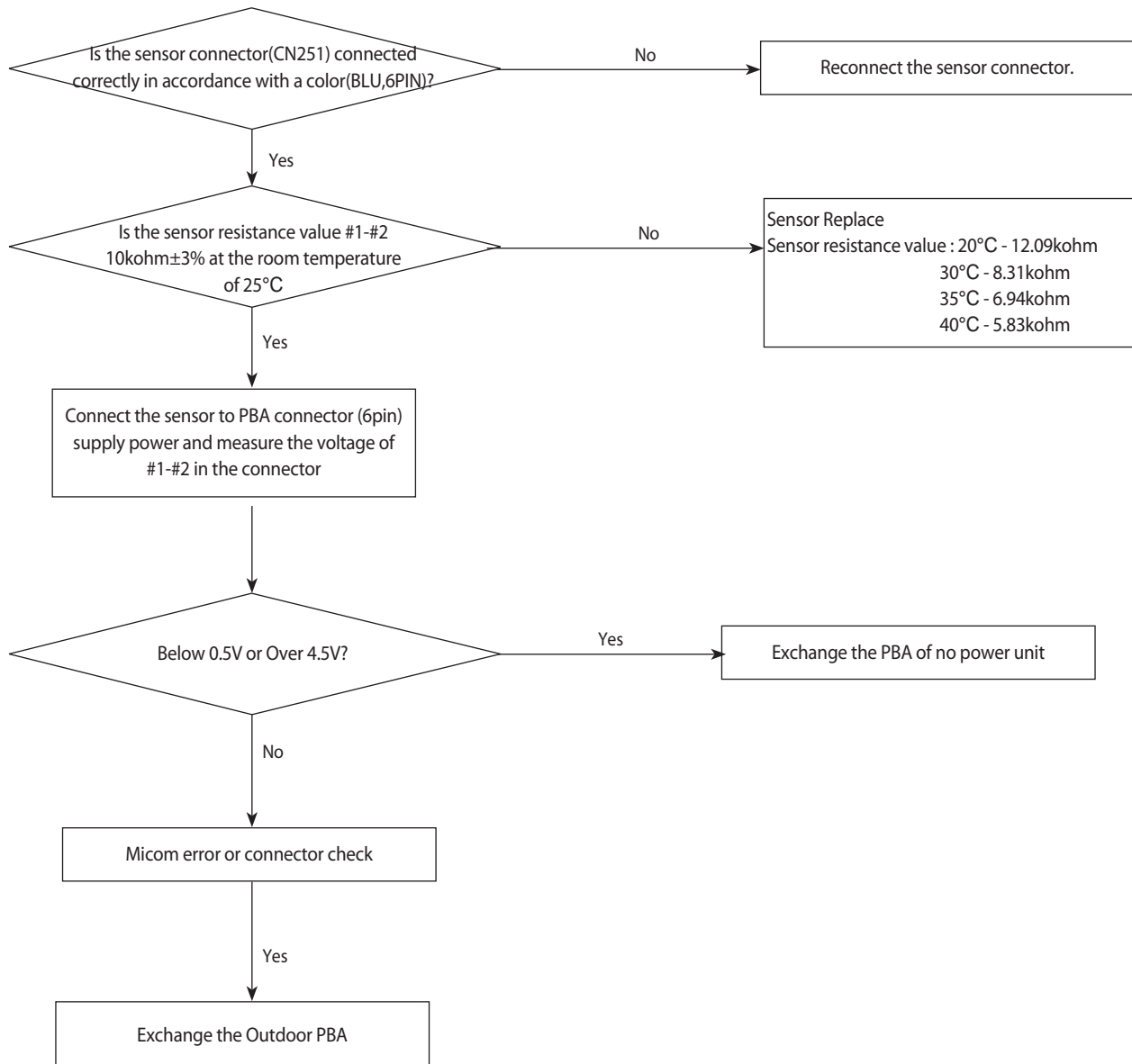


4-4-2 Outdoor temperature sensor error

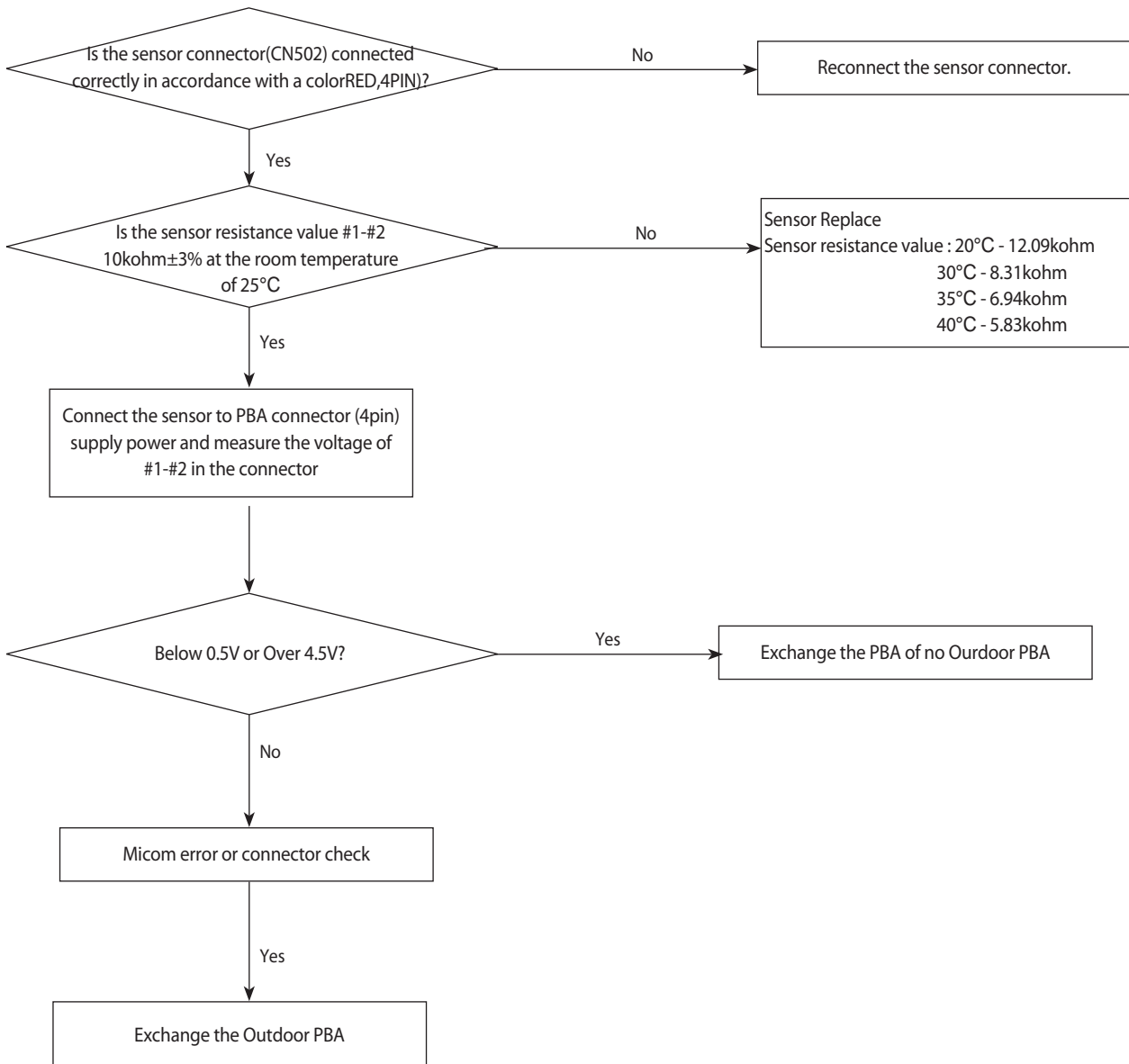
1. 1.Checklist :

- 1) Is the cable between the indoor unit and outdoor unit connected correctly?
- 2) Is the sensor placed correctly?
- 3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
- 4) Is the resistance value of sensor connection pull-up correct?

4-4-2-1. Troubleshooting procedure (PF2)



4-4-2-2. Troubleshooting procedure (PF3)

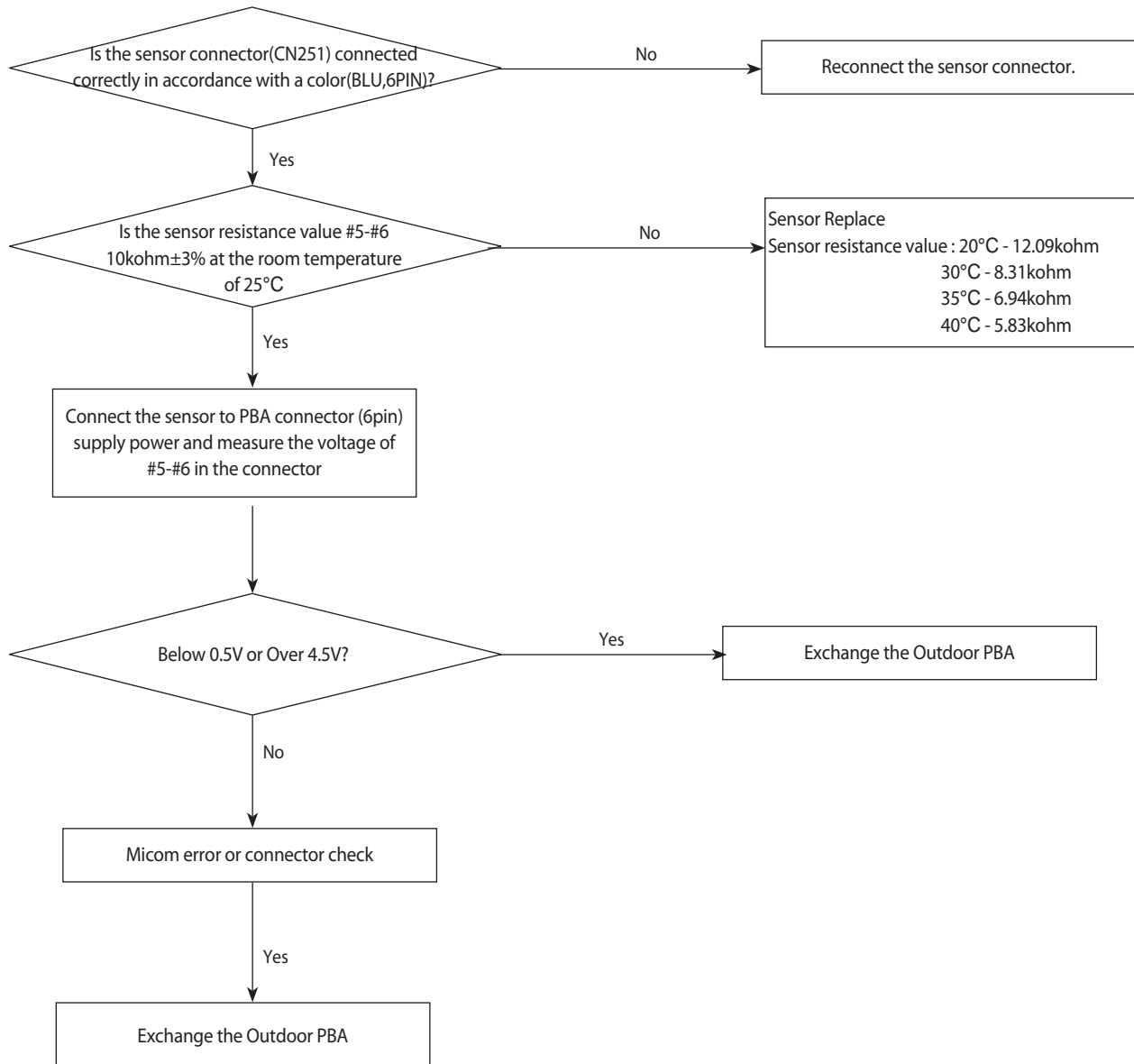


4-4-3 Outdoor Coil temperature sensor error

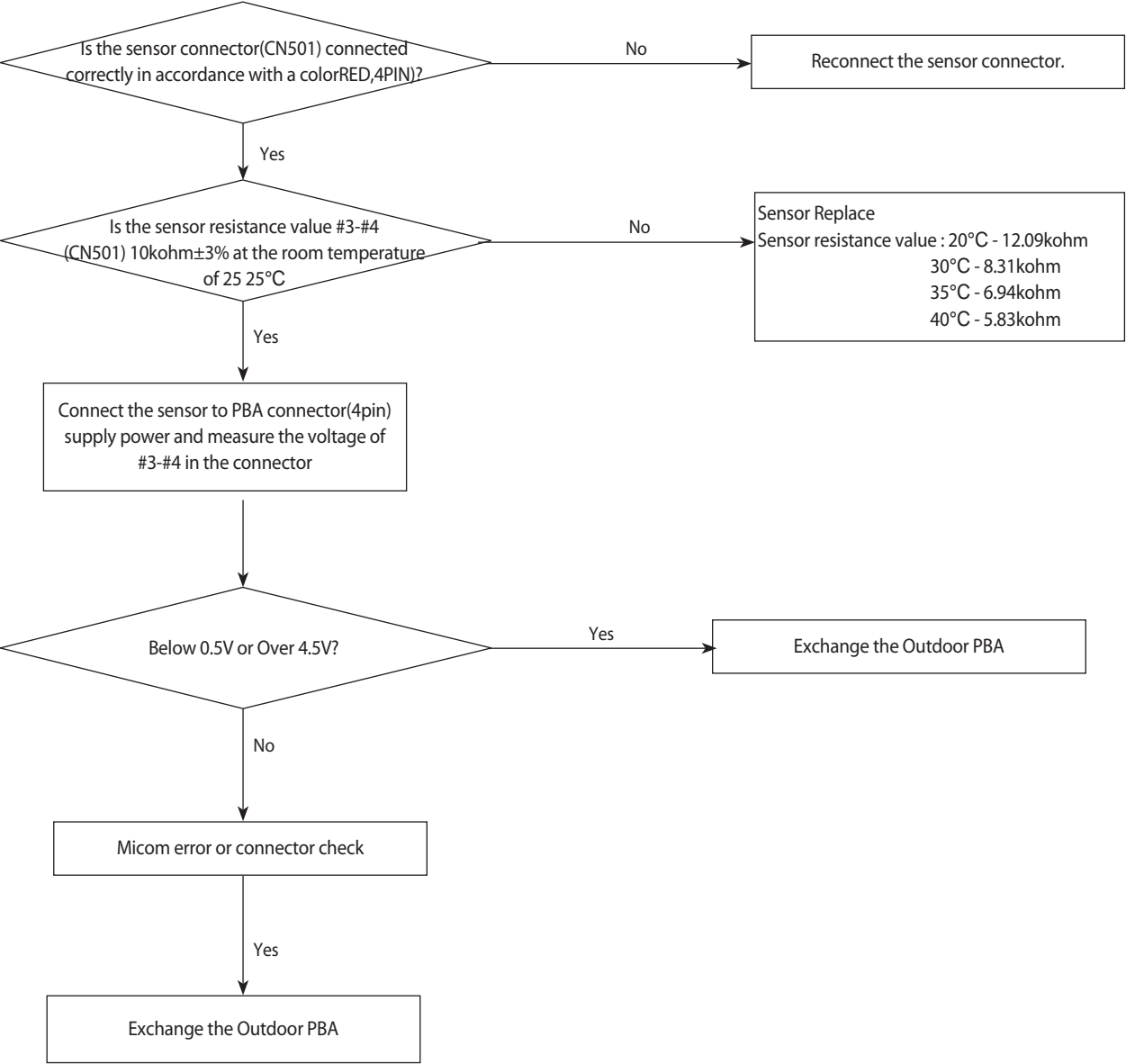
1. Checklist :

- 1) Is the sensor connected correctly?
- 2) Is the sensor placed correctly?
- 3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
- 4) Is the resistance value of sensor connection pull-up correct?

4-4-3-1. Troubleshooting procedure (PF2)



4-4-3-2. Troubleshooting procedure (PF3)

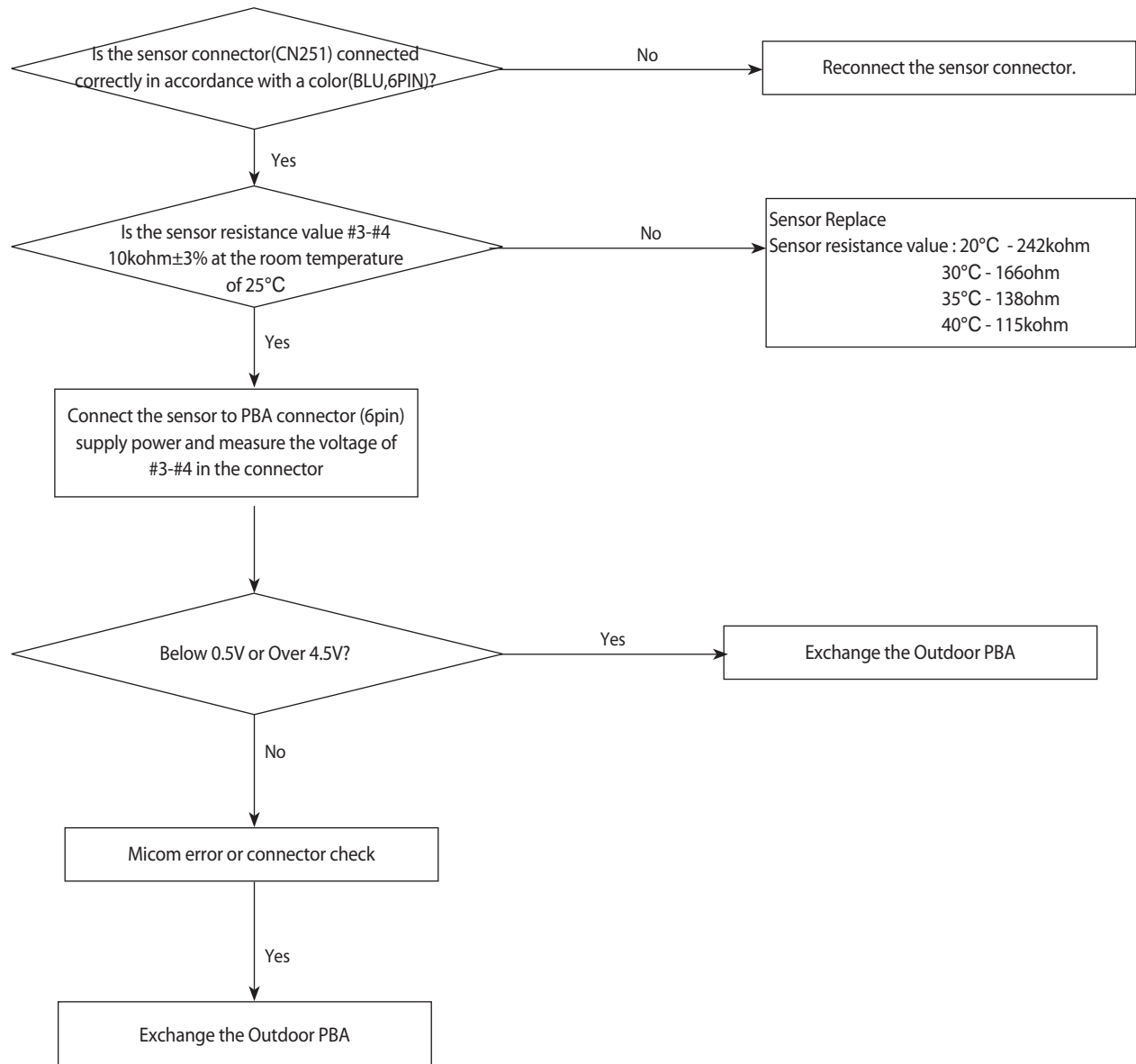


4-4-4 Outdoor Discharge temperature sensor error

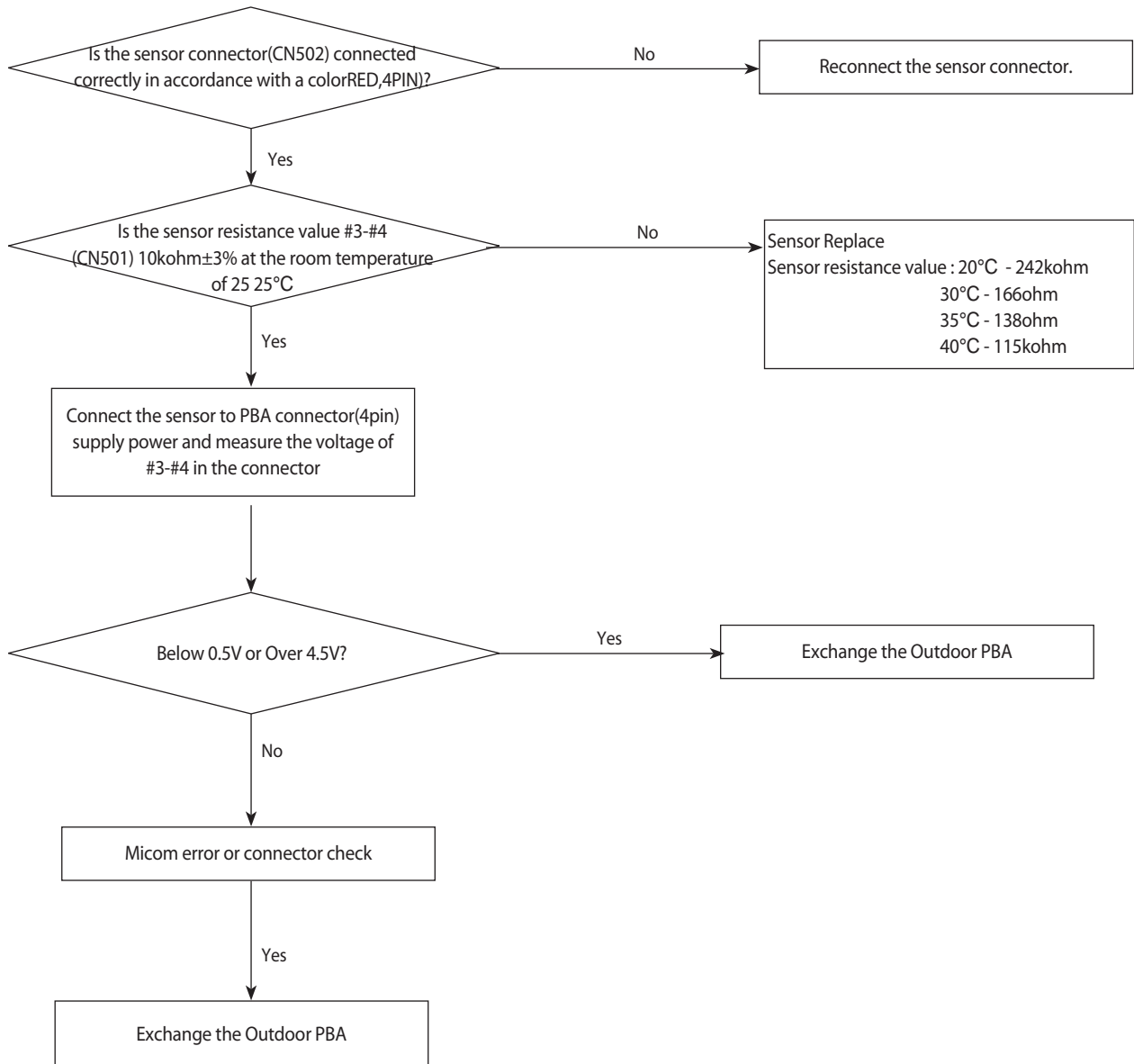
1.Checklist :

- 1) Is the sensor connected correctly?
- 2) Is the sensor placed correctly?
- 3) Does the both terminal of sensor satisfy the resistance value in accordance with temperature?
- 4) Is the resistance value of sensor connection pull-up correct?

4-4-4-1. Troubleshooting procedure (PF2)



4-4-4-2. Troubleshooting procedure (PF3)

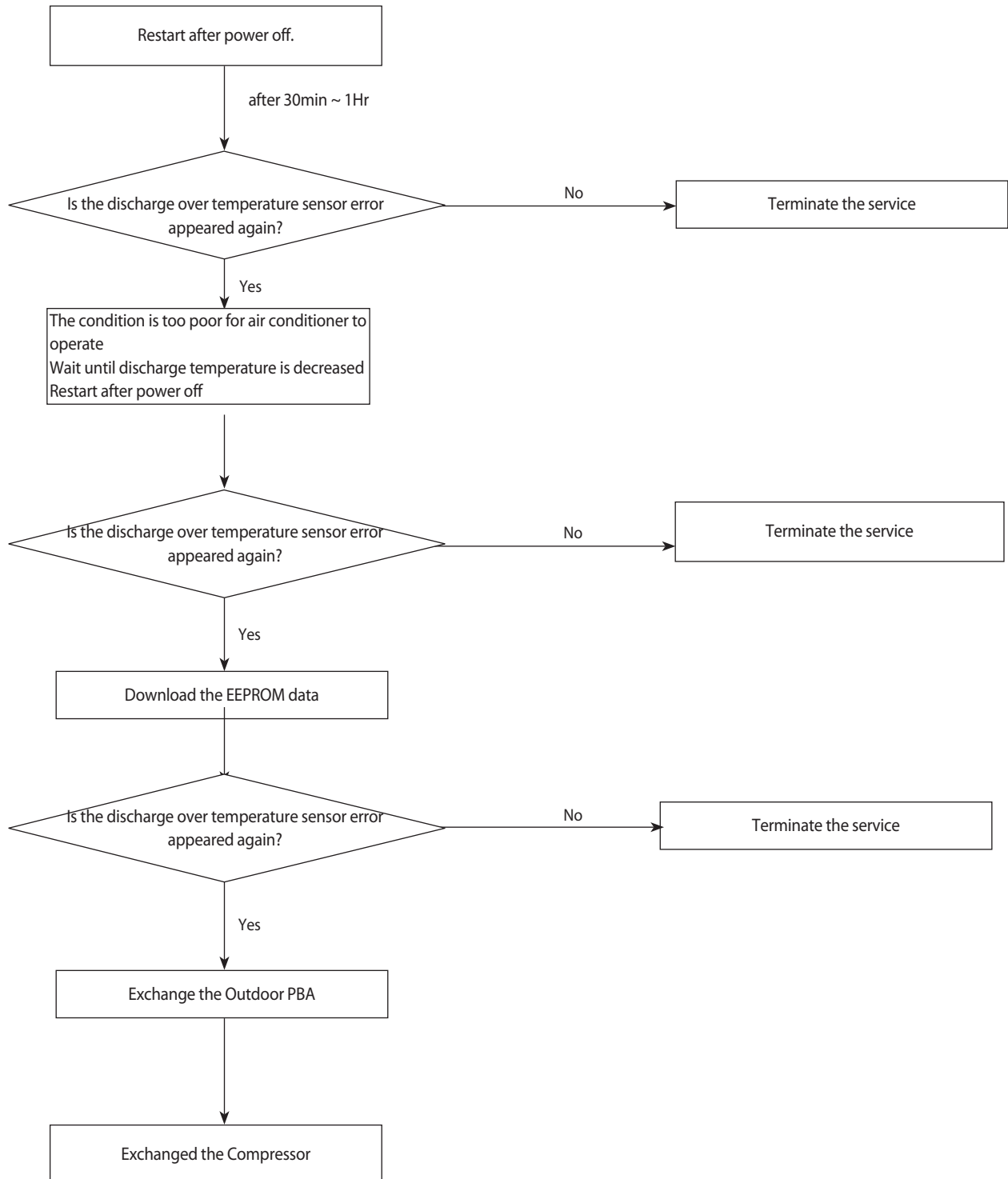


4-4-5 Outdoor Discharge over temperature error

1. Checklist :

- 1) Check the discharge temperature in the outdoor unit
- 2) Check the compressor locking or gas leak
- 3) 3) Download the EEPROM data

2. Troubleshooting procedure

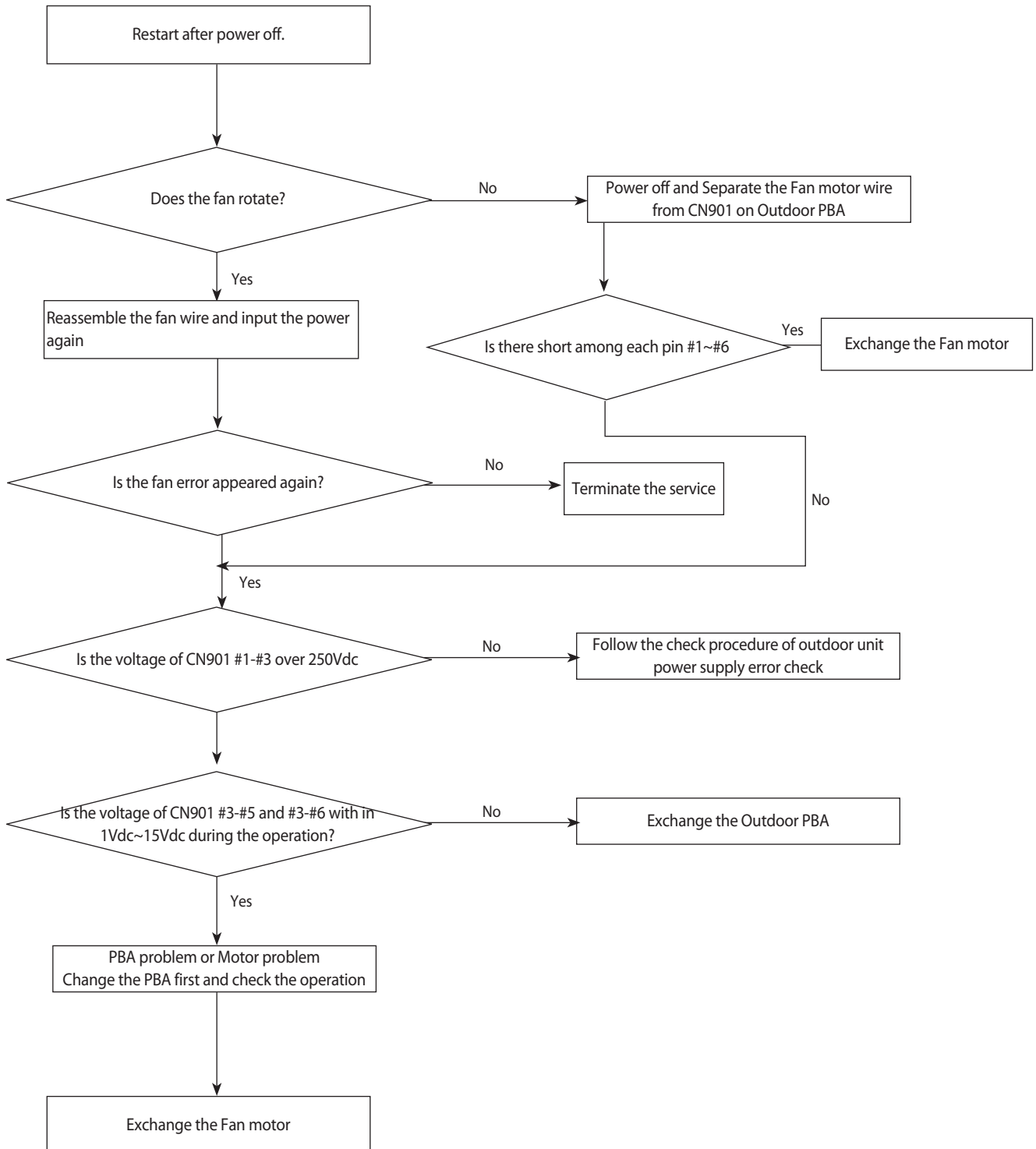


4-4-6 Outdoor Fan motor error

1. Checklist :

- 1) Are the input power voltage and the power connection correct?
- 2) Is the motor wire connected to the outdoor PBA correctly?
- 3) Is there no assembly error or none-assembly in the terminal of motor wire connector?
- 4) Is there no obstacle at the surrounding of motor and propeller?

2. Troubleshooting procedure

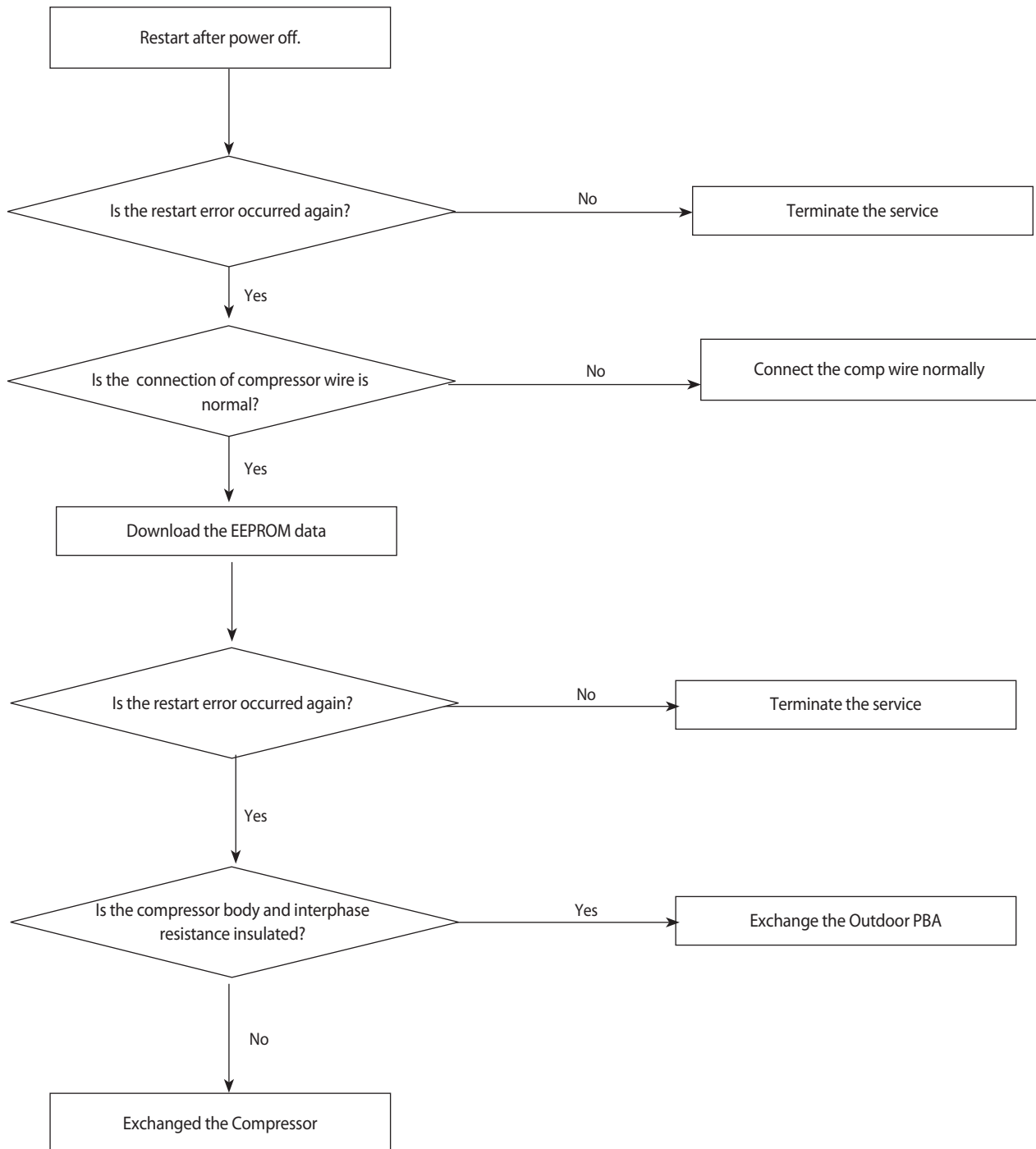


4-4-7 Compressor starting error

1. Checklist :

- 1) Is the connection of cable for the compressor?
- 2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
- 3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

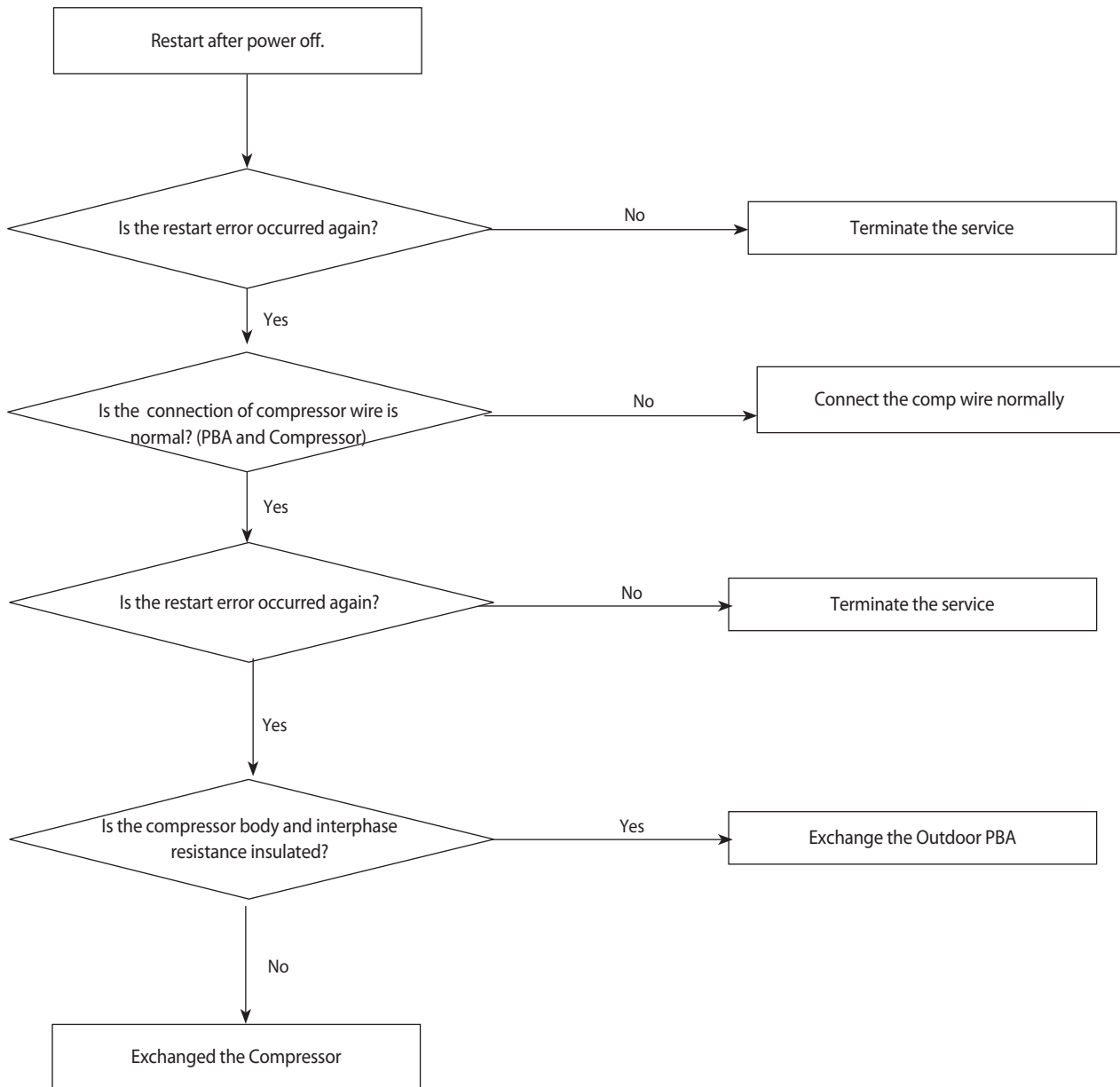


4-4-8 Compressor wire missing error/rotation error

1. Checklist :

- 1) Is the connection of cable for the compressor?
- 2) Is the compressor wire is connected clockwise? U(RED)-V(BLU)-W(YEL)
- 3) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

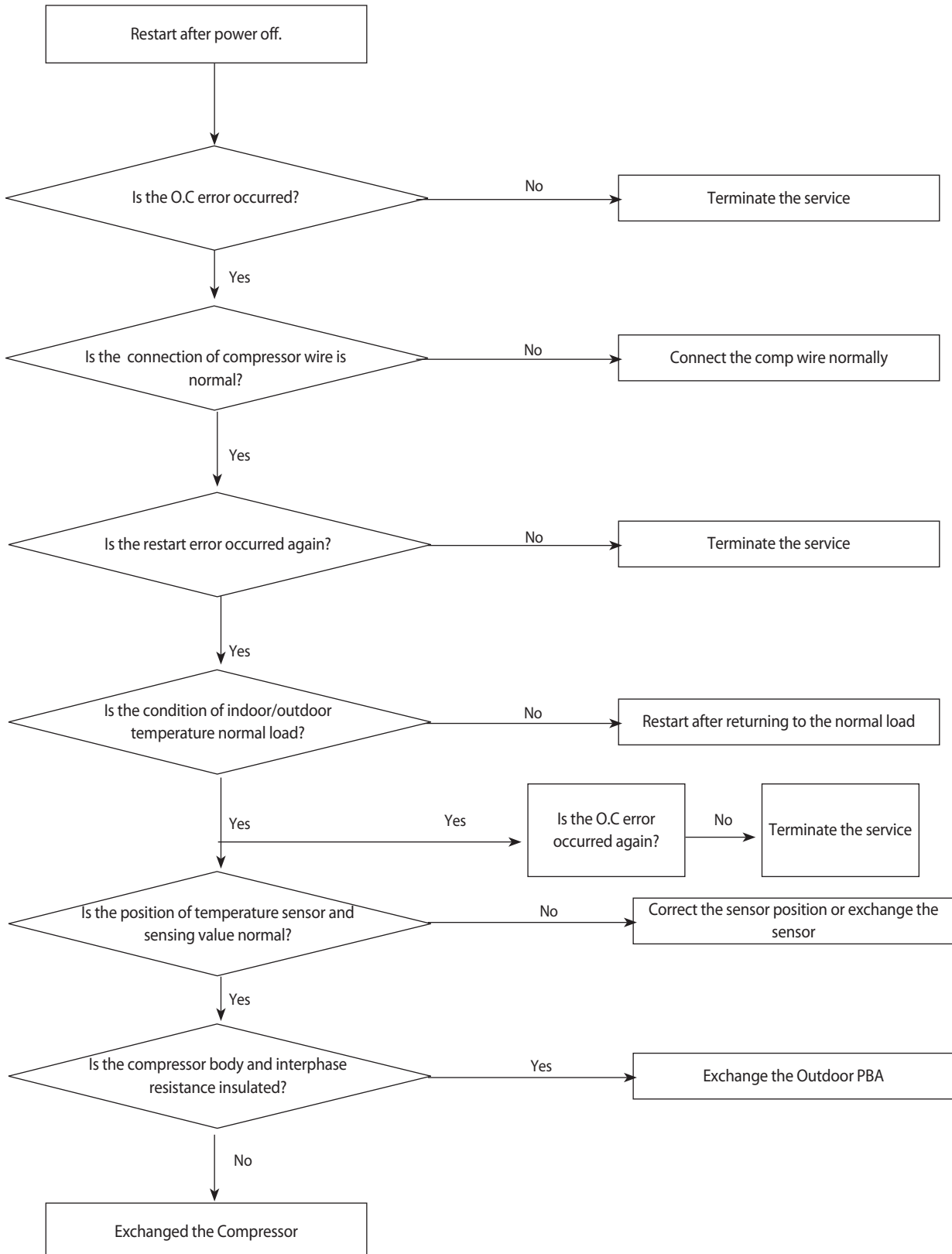


4-4-9 O.C(Over Current) error

1.Checklist :

- 1) Is the IPM Shunt(PF2:R451,R452,R453,PF3:R413,R414,R415) resistance value correct? Check the resistor is opened
- 2) Is the condition of surrounding temperature abnormal overload?
- 3) Is there any problem as like the temperature sensor separation or measurement value error?
- 4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

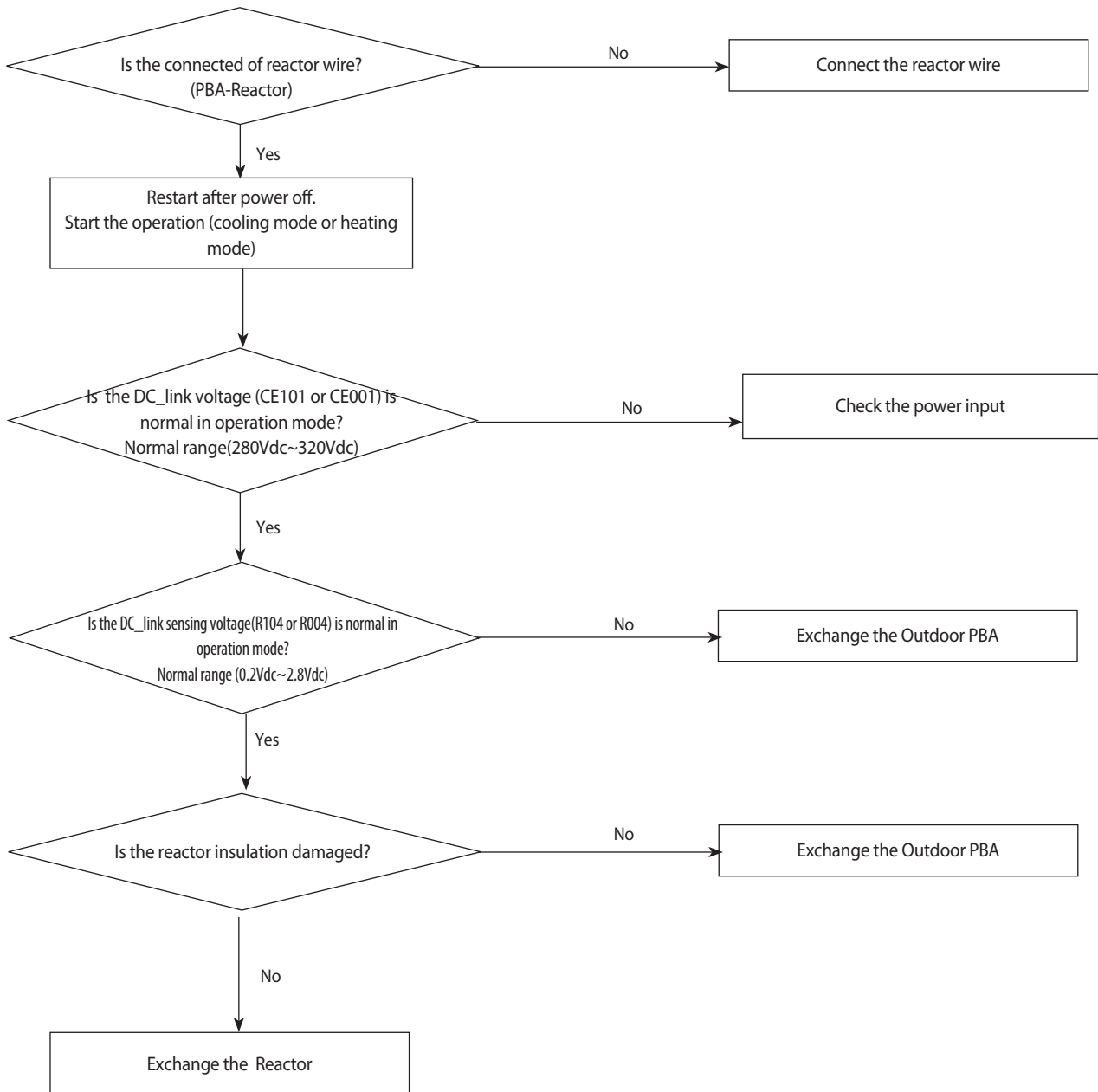


4-4-10 DC_link voltage sensor error

1. Checklist :

- 1) Is the input voltage of outdoor terminal block is normal?
- 2) Is the reactor wire connected?
- 3) Is the DC_link capacitor(PF2:CE101,CE102,CE103,PF3:CE001,CE002,CE003,CE004)) assembled in accordance the specification? (Outdoor PBA)
- 4) Is the DC_link resistor(PF2:R104,R106,R107,R108,PF3:R004,R005,R006,R007) value is normal? (Outdoor PBA)

2. Troubleshooting procedure



4-4-11 DC_link voltage under/over error, Over voltage protection error/PFC over load

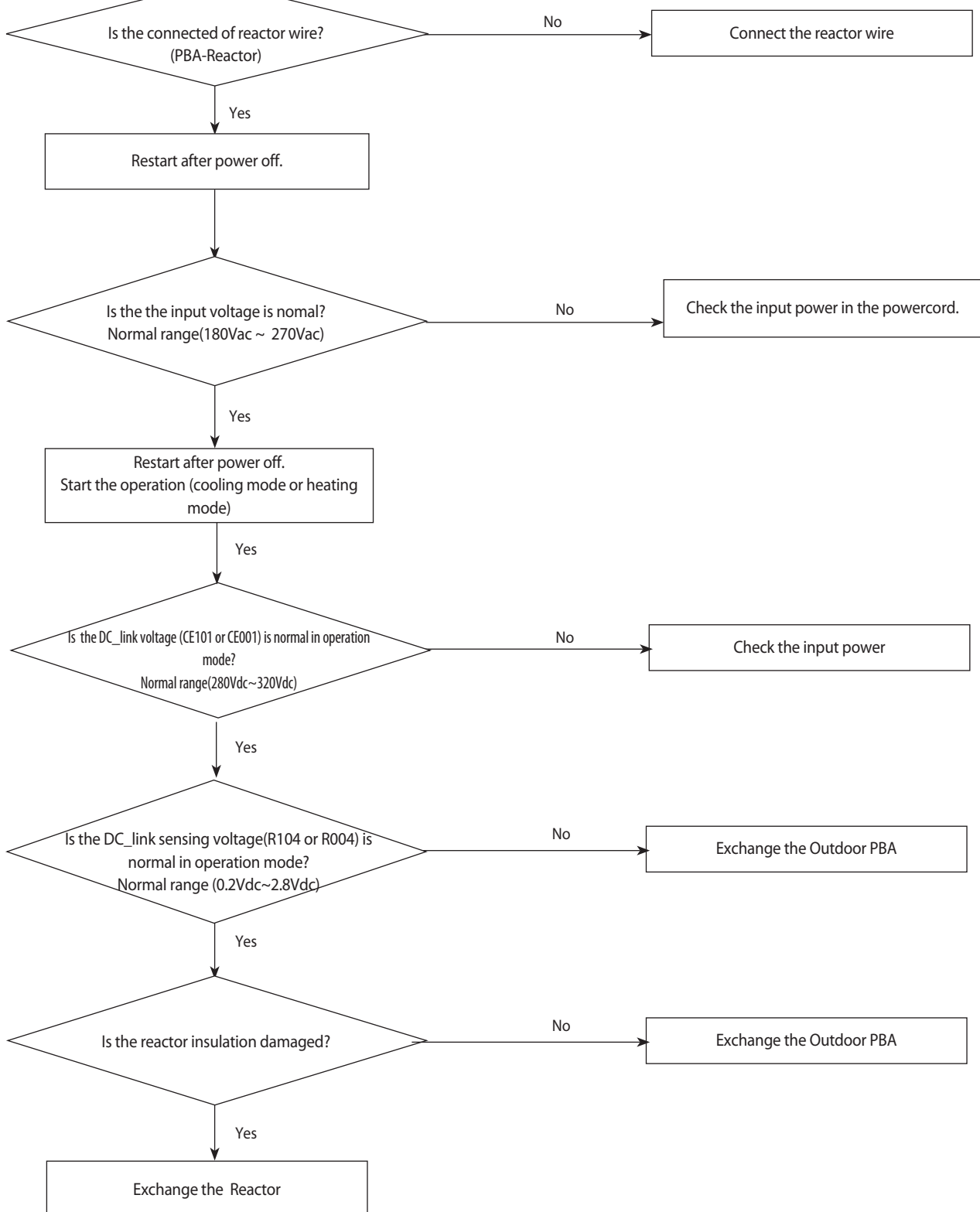
1. Checklist :

- 1) Is the input voltage of outdoor terminal block is normal?
- 2) Is the reactor wire connected?
- 3) Is the reactor wire connected?
- 4) Is the DC_link capacitor(PF2:CE101,CE102,CE103,PF3:CE001,CE002,CE003,CE004)) assembled in accordance the specification?

(Outdoor PBA)

- 5) Is the DC_link resistor(PF2:R104,R106,R107,R108,PF3:R004,R005,R006,R007) value is normal? (Outdoor PBA)

2. Troubleshooting procedure

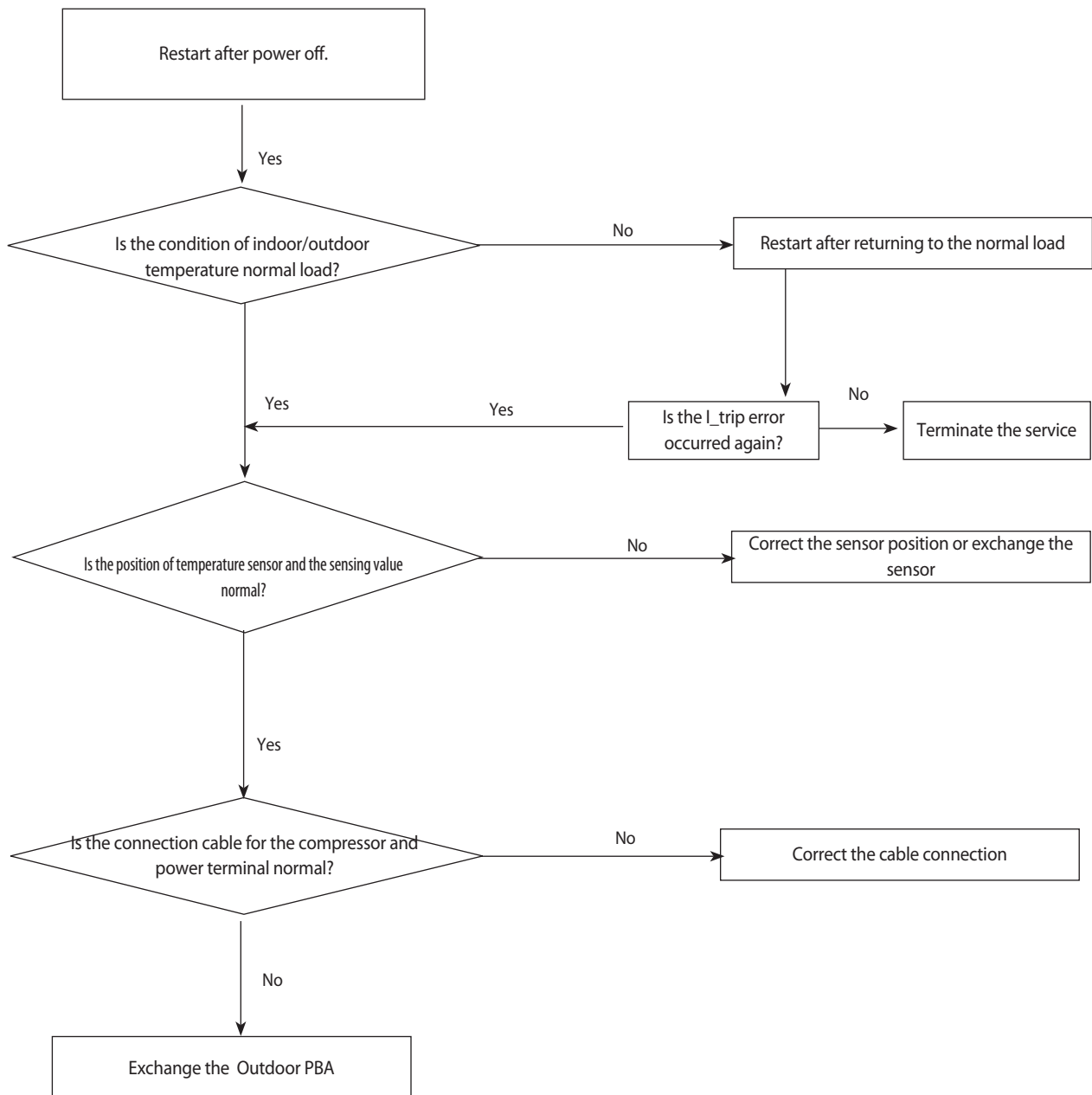


4-4-12 DC_link voltage sensor error

1. Checklist :

- 1) Is the PFC Shunt(PF2:R062,R063,PF3:R807,R808,R809) resistance value correct? Check the resistor is opened
- 2) Is the condition of surrounding temperature abnormal overload?
- 3) Is there any problem as like the temperature sensor separation or measurement value error?
- 4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

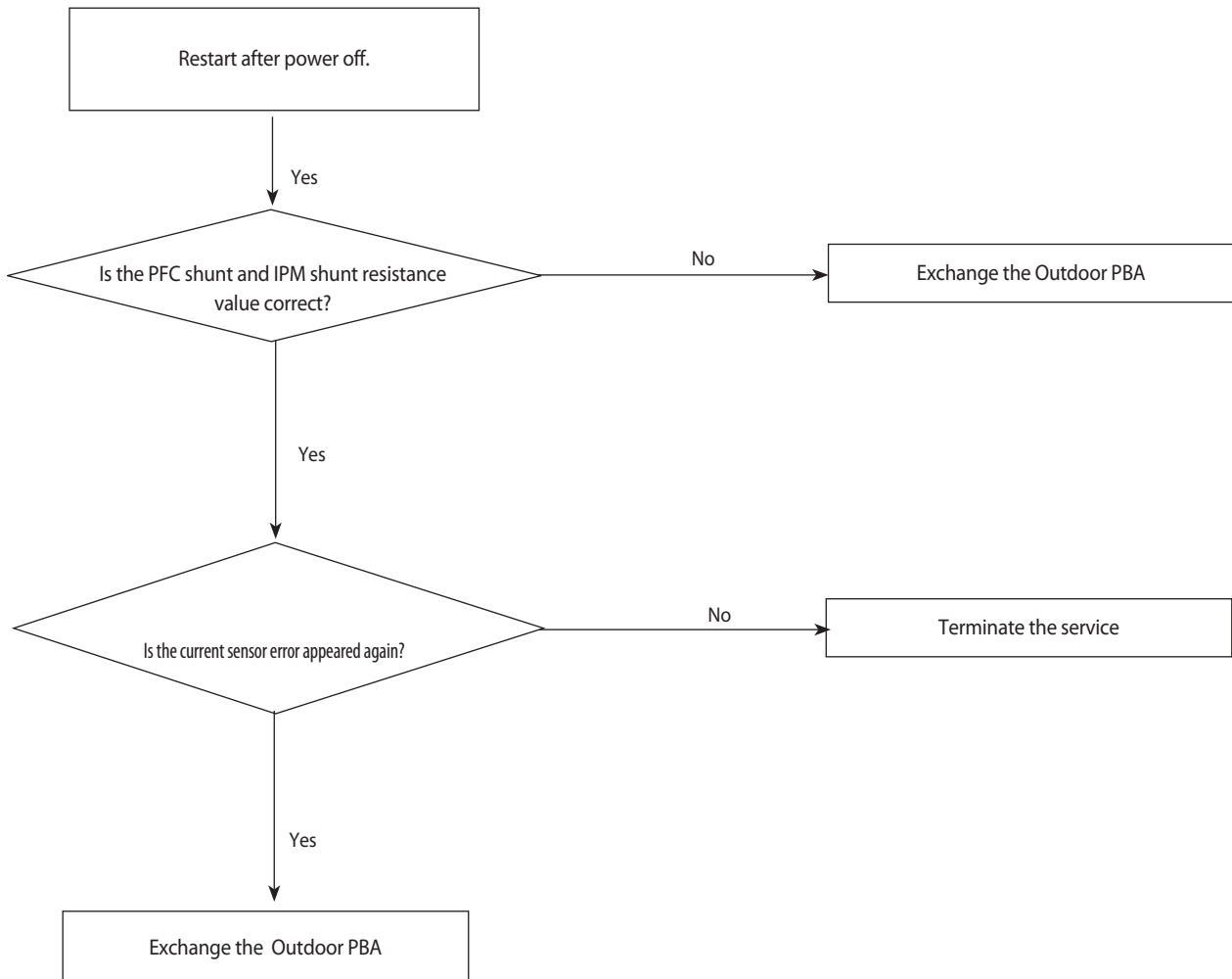


4-4-13 Current sensor error/Input current sensor error

1. Checklist :

- 1) Is the PFC Shunt(PF2:R062,R063,PF3:R807,R808,R809) resistance value correct? Check the resistor is opened
- 2) Is the IPM Shunt(PF2:R451,R452,R453,PF23:R413,R414,R415) resistance value correct? Check the resistor is opened
- 3) Is there no short or open around IC451(PF2) or IC451,IC452(PF3)?

2. Troubleshooting procedure

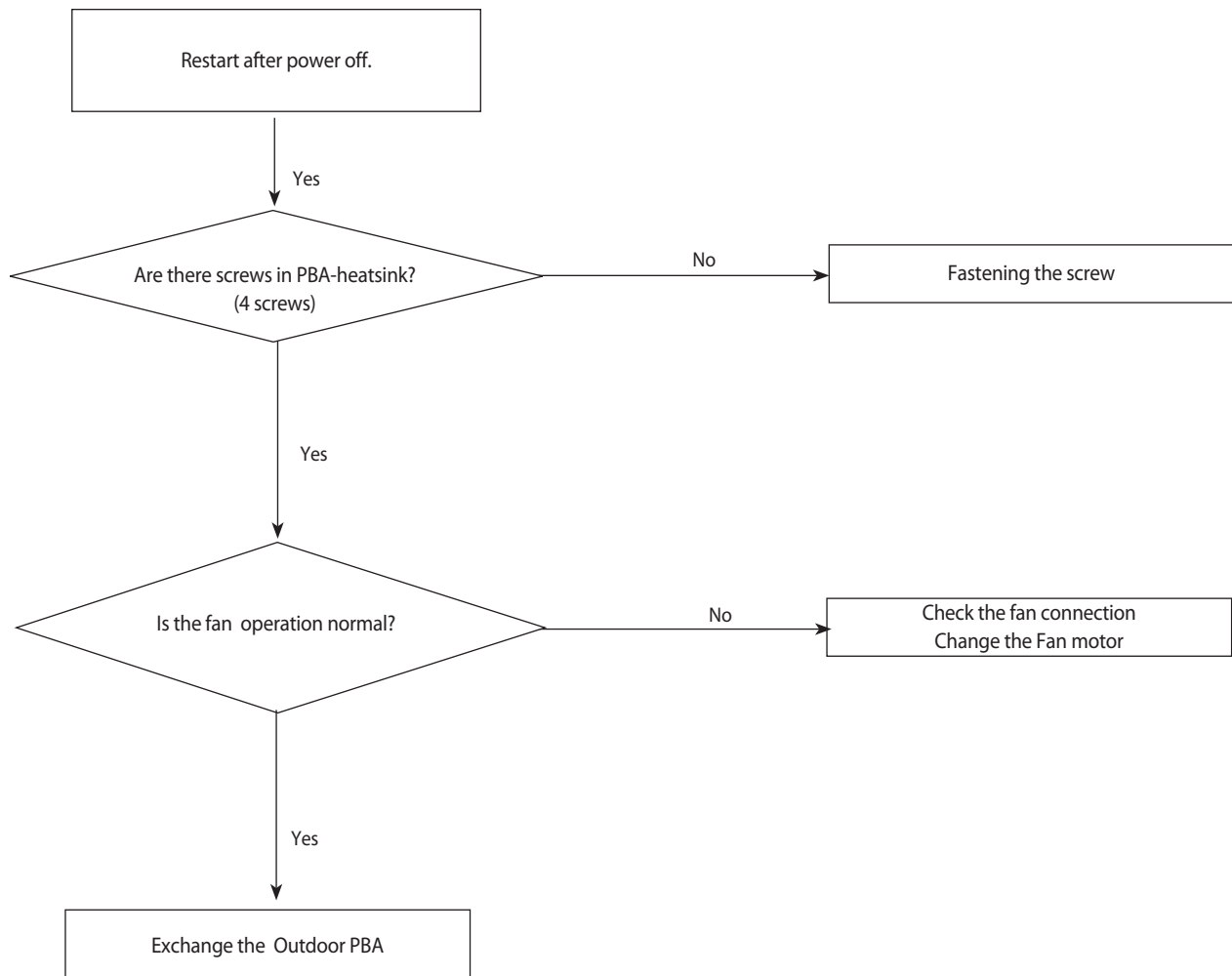


4-4-14 Heatsink sensor error/Heatsink over heat

1.Checklist :

- 1) Are there screws assembly in PBA-heatsink?
- 2) Is the gap PBA-heatsink
- 3) Is the fan operation normal?
- 4) Is the cover assembly in control-box normal?

2. Troubleshooting procedure

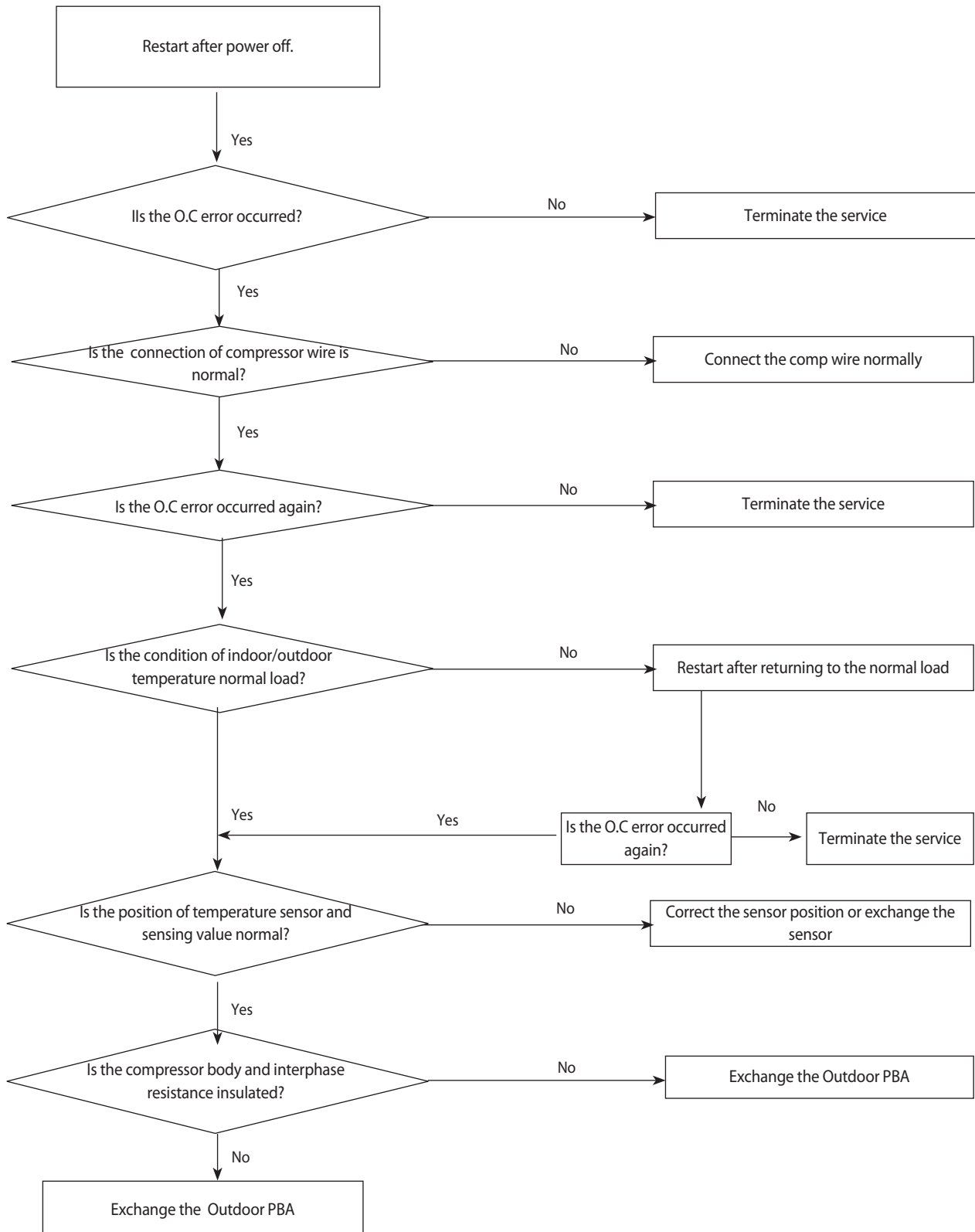


4-4-15 Comp Vlimit error/Comp current limit error

1. Checklist :

- 1) Is the PFC Shunt(PF2:R062,R063,PF3:R807,R808,R809) resistance value correct? Check the resistor is opened
- 2) Is the condition of surrounding temperature abnormal overload?
- 3) Is there any problem as like the temperature sensor separation or measurement value error?
- 4) Is the interphase resistance of compressor normal?

2. Troubleshooting procedure

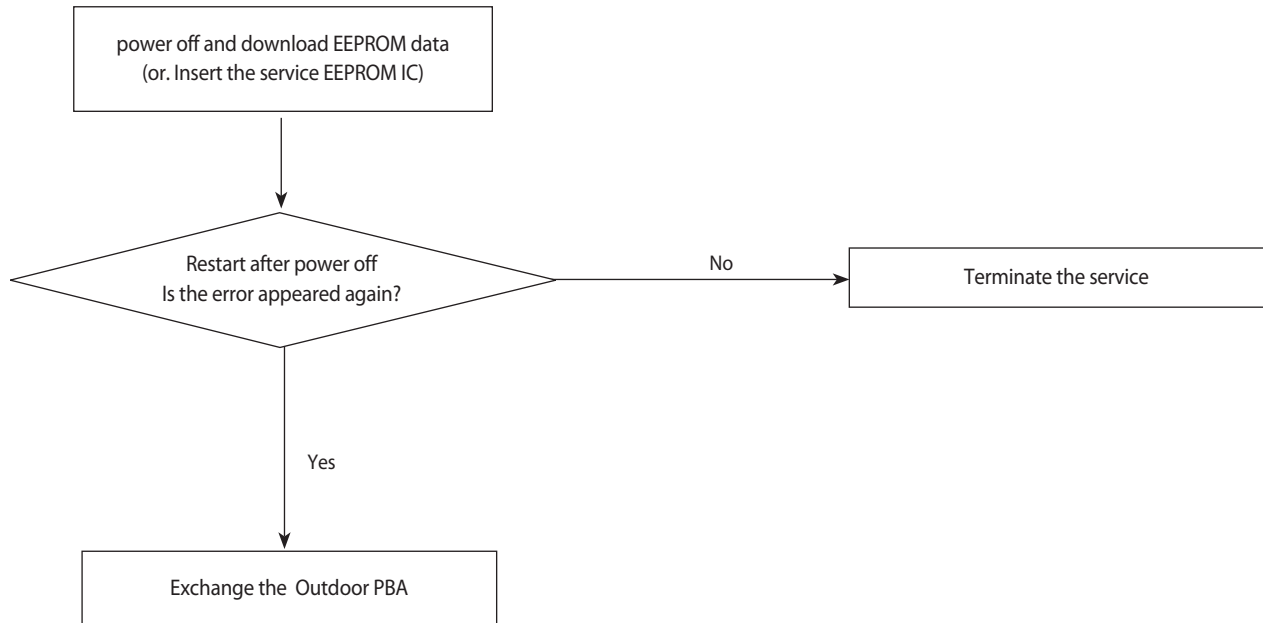


4-4-16 EEPROM error/OTP error

1. Checklist :

- 1) Is there a short around micom?
- 2) Is there a short around IC202(PF2) or IC701(PF3)?
- 3) Did you download or insert EEPROM IC, after changing outdoor PBA?

2. Troubleshooting procedure

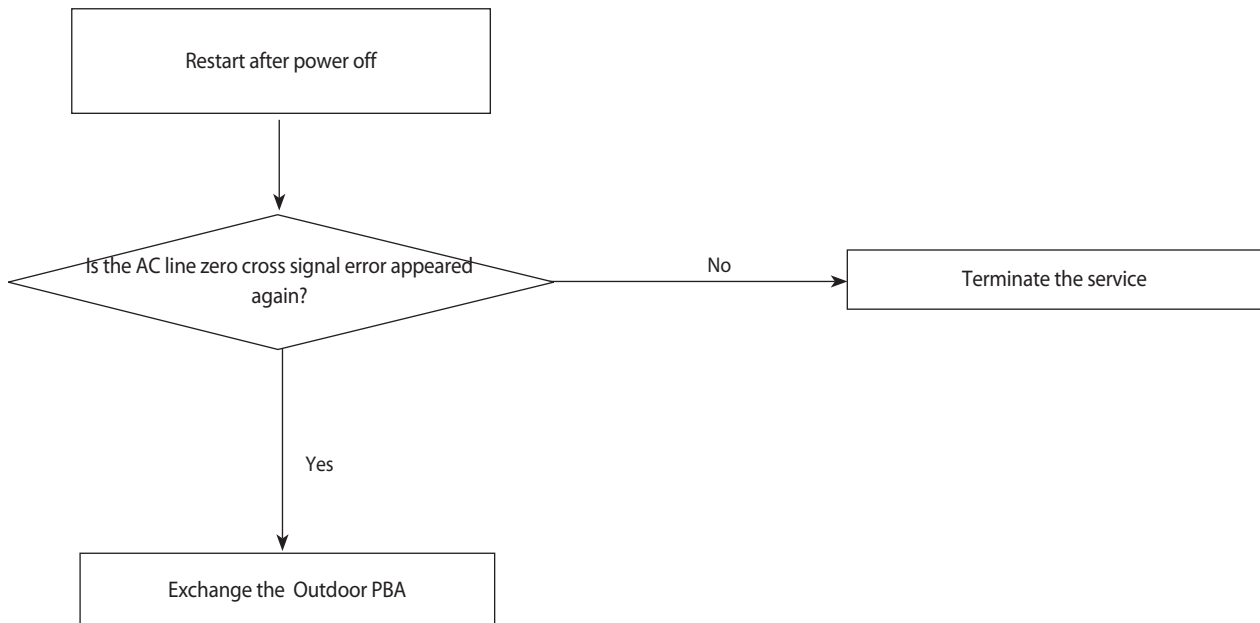


4-4-17 AC zero cross signal error

1. Checklist :

- 1) Check the power condition at customer's house (Is there any power noise?)
- 2) Have been there power failure?

2. Troubleshooting procedure

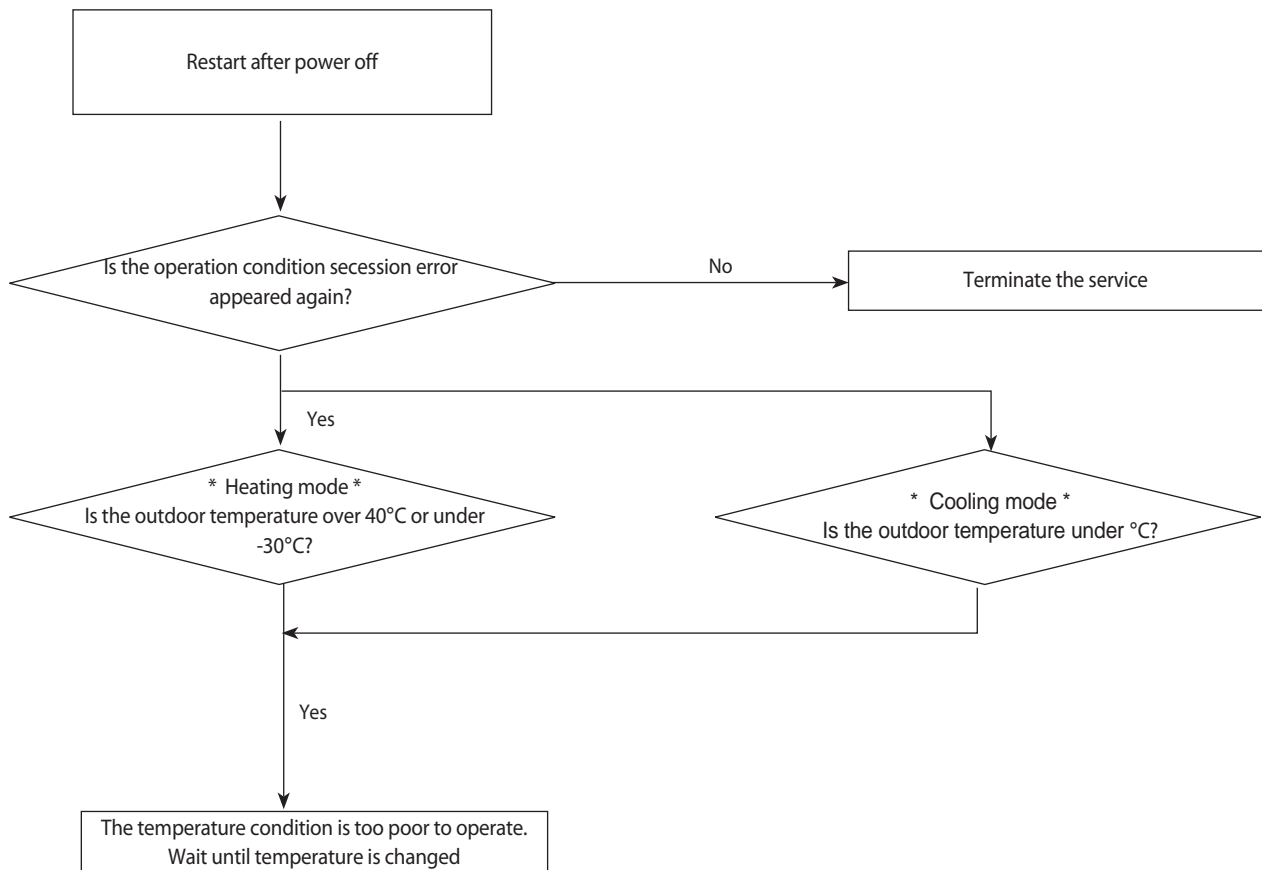


4-4-18 Operation condition secession error

1. Checklist :

- 1) Check the temperature around the outdoor unit.

2. Troubleshooting procedure

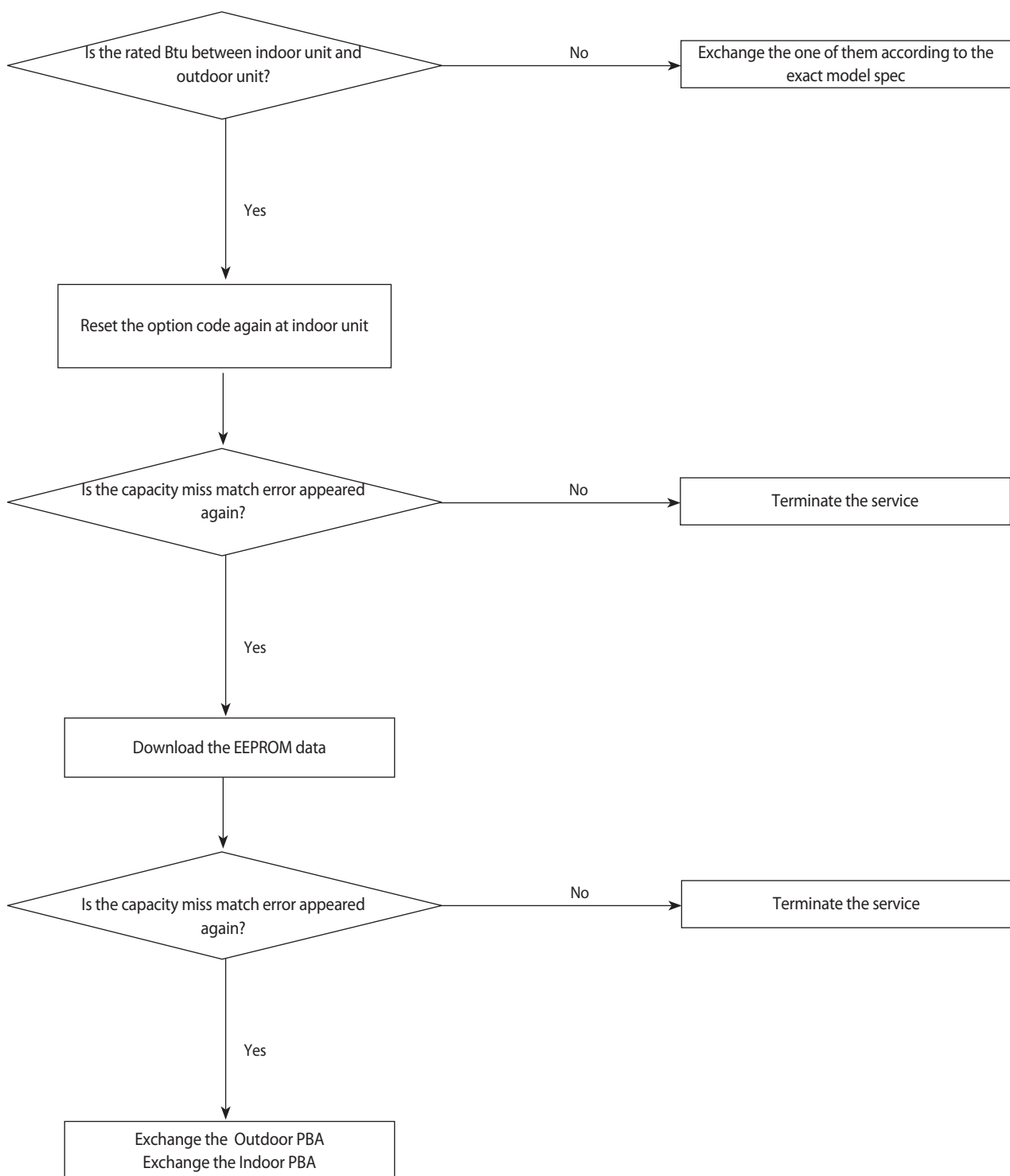


4-4-19 Capacity miss match error

1. Checklist :

- 1) Check the Btu between indoor and outdoor unit
- 2) Check the indoor unit option and outdoor unit EEPROM data

2. Troubleshooting procedure

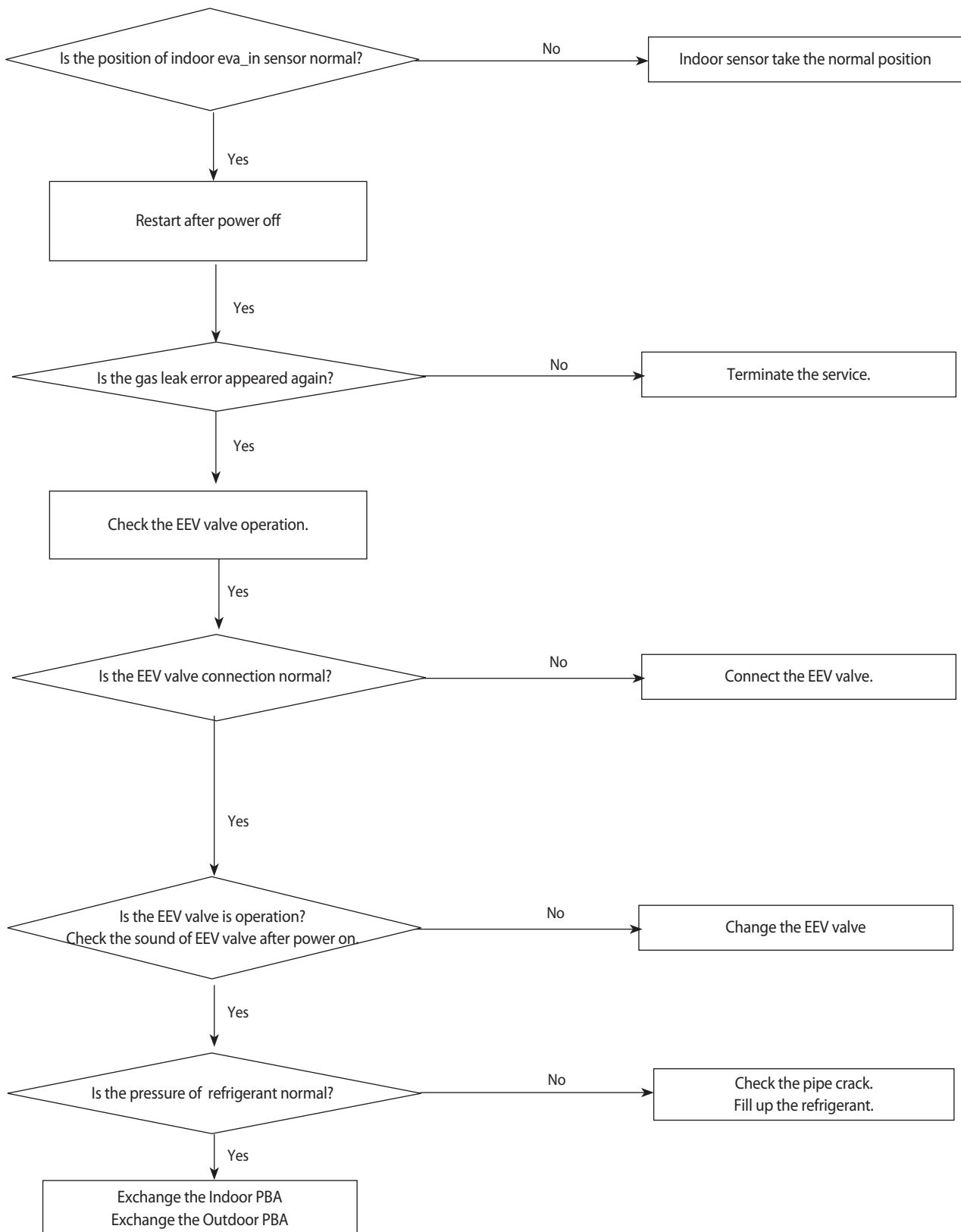


4-4-20 Gas leak error

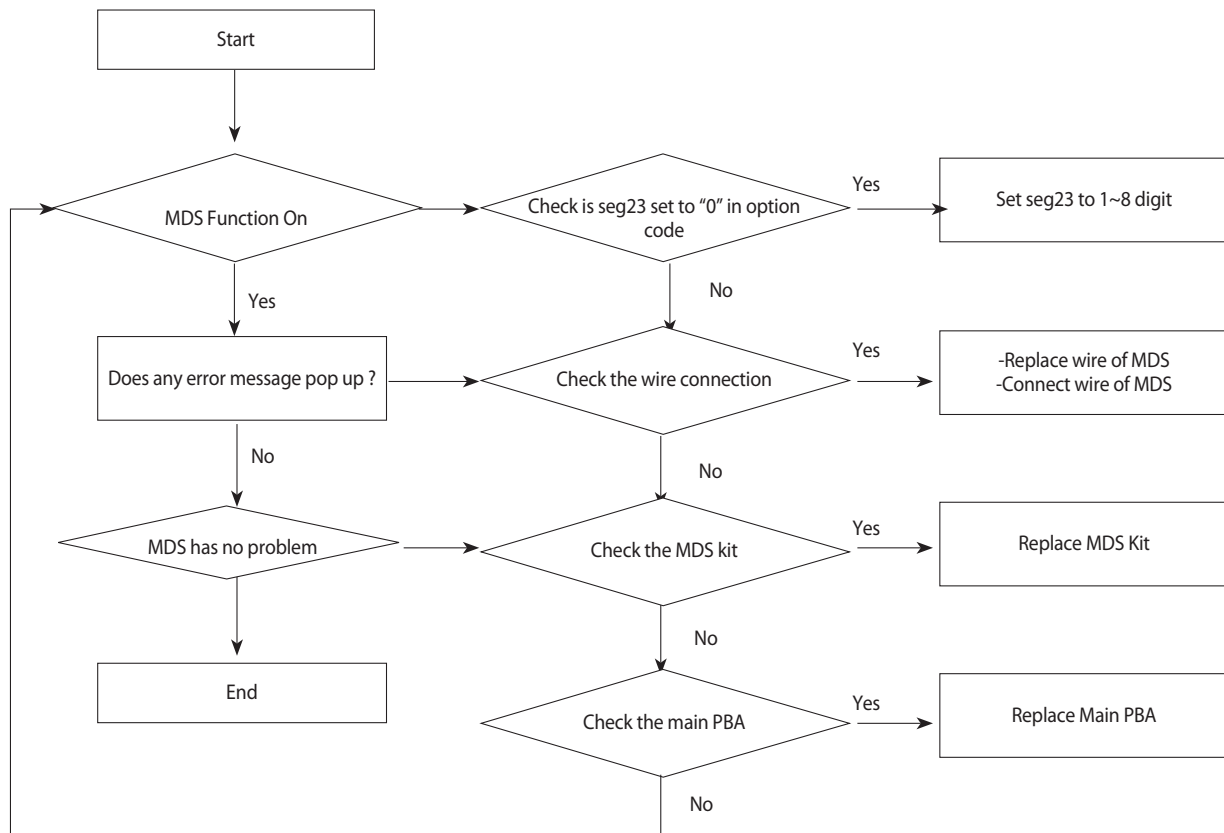
1. Checklist :

- 1) Is the position of indoor Eva_in sensor normal?
- 2) Check the pipe crack
- 3) Check the EEV valve connection in Outdoor unit
- 4) Check the refrigerant was charged

2. Troubleshooting procedure



4-4-21 MDS Error Flow chart



✳MDS Function only can be set in wired remote controller or central controller.

✳Error Message(Error message will be appeared after 3minutes)

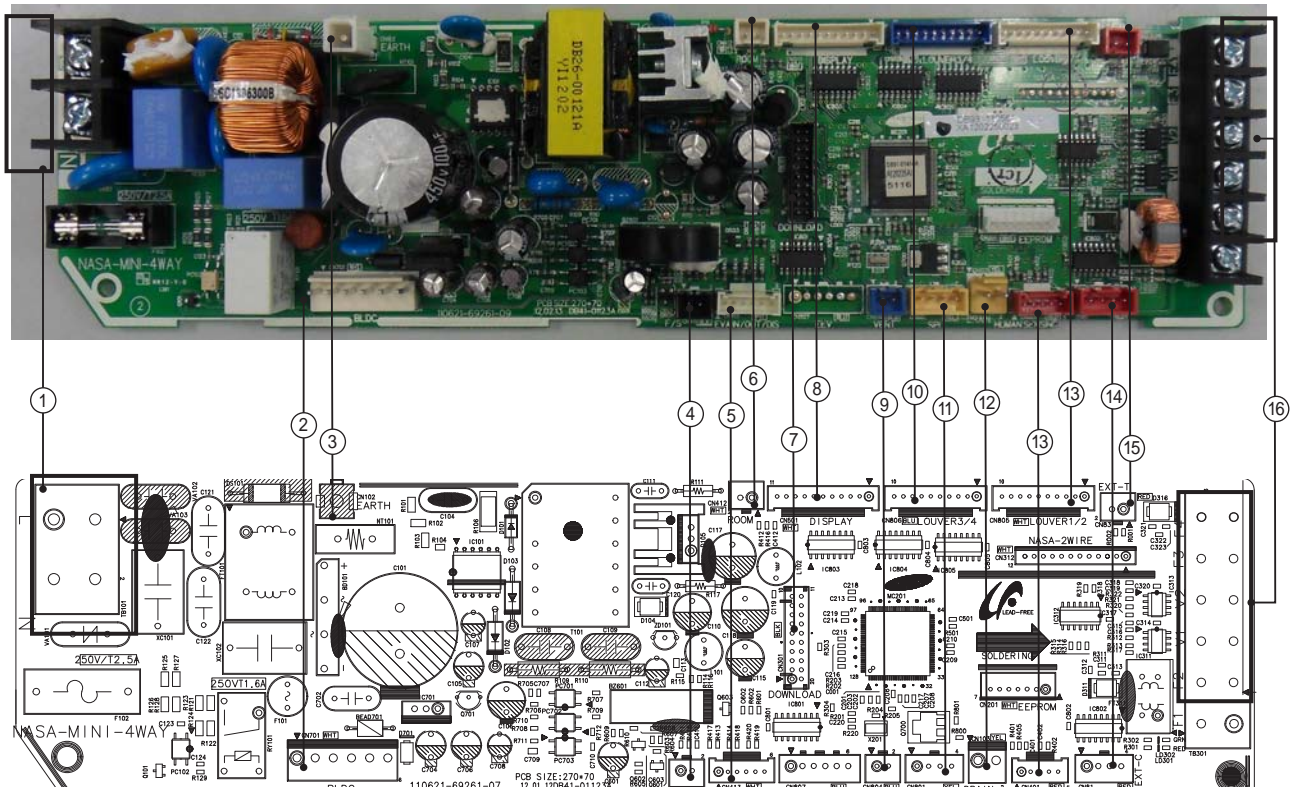
-Wired remote controller: "E143" message is pop up.

-Display Panel: Operation & filter LED is blinking at the same time,after indoor unit is power off.

5. PCB Diagram

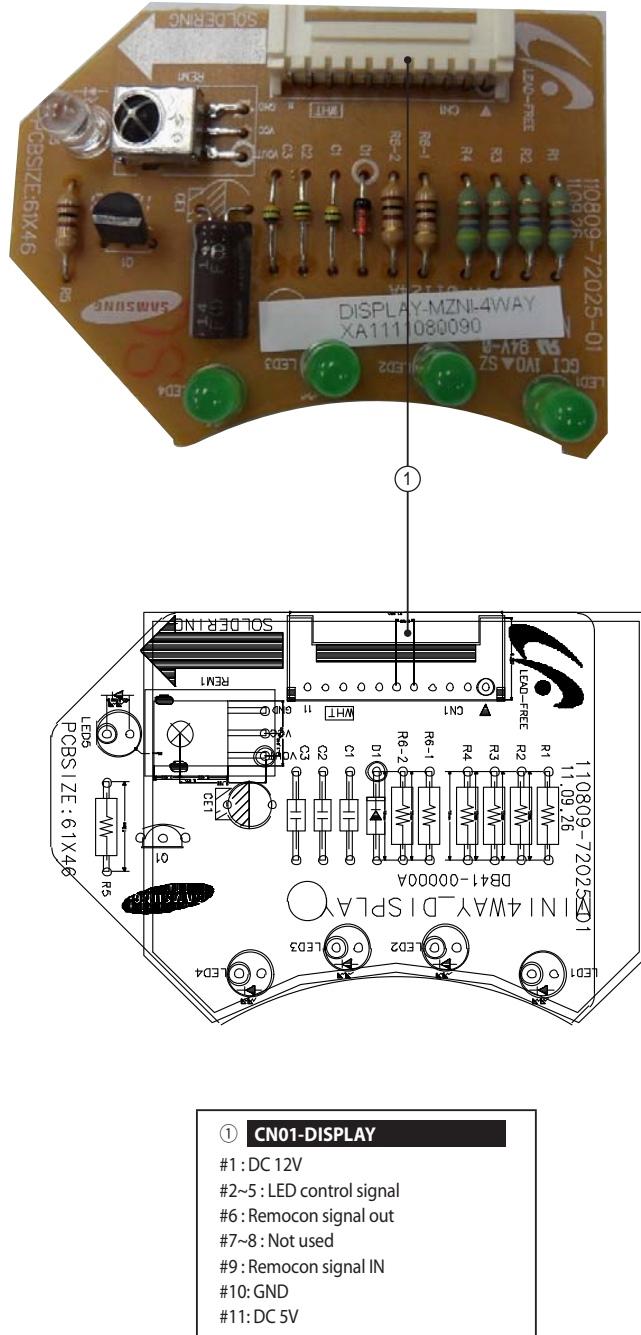
5-1 PCB Diagram

5-1-1 MINI 4 WAY Indoor Unit

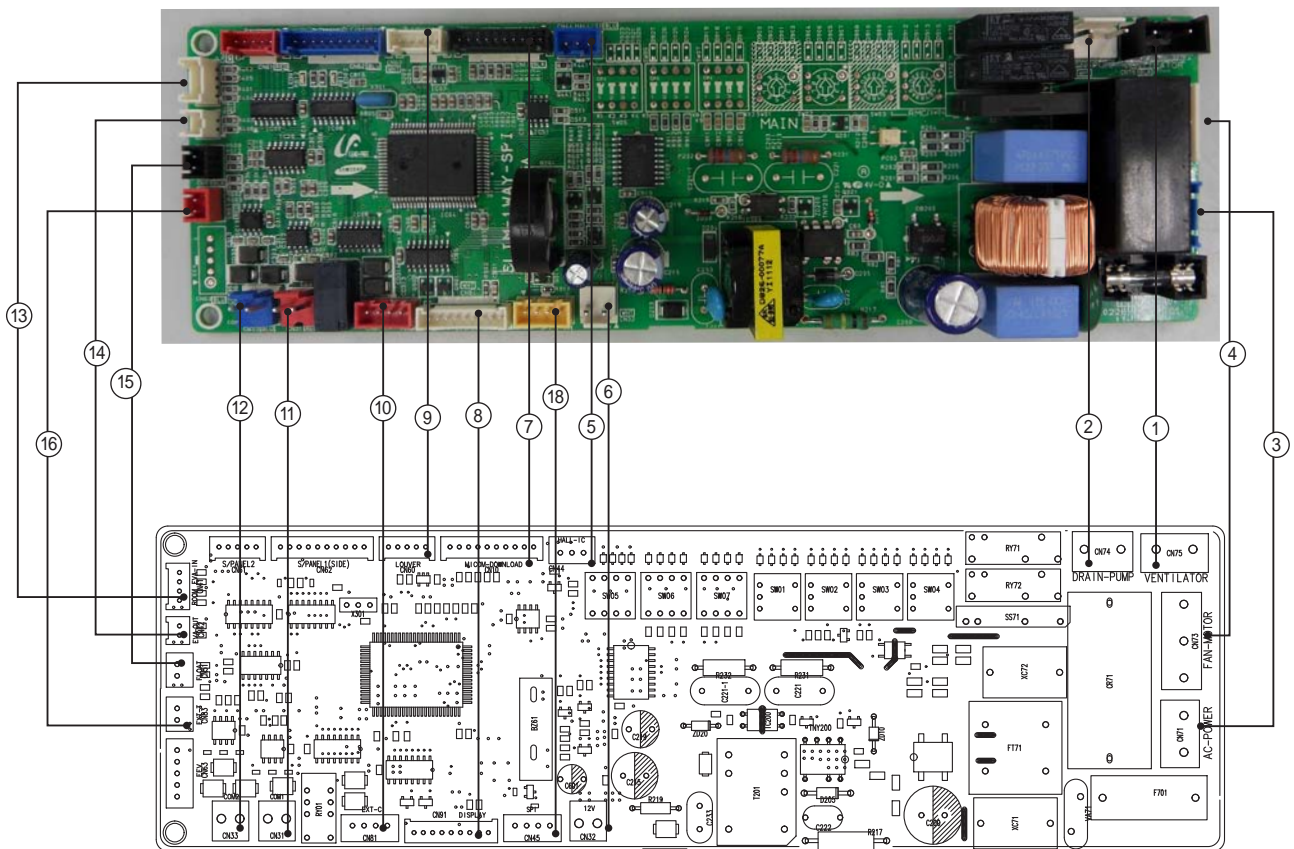


① Main power input 1(L):Phase L 2(N):Phase N	② BLDC fan #1:DC310V #2:Not used #3:AGND #4:DC15V #5:FAN RPM #6:RPM FEEDBACK	③ Earth wire #1:GND	④ Float switch #1:Float_SW #2:GND
⑤ Eva in/out sensor #1:EVA IN temperature sensor #2,4,6:GND #3:EVA Out temperature sensor #5:EVA discharge	⑥ Room temperature #1:Room temperature sensor #2:GND	⑦ S/W download S/W download	⑧ Panel display #1:DC12V #2-5: LED control signal #6: REMOCON signal out #7,8: Not used #9: REMOCON_INT #10:GND #11:Vcc
⑨ VENT #1:DC12V #2:VENT_OUT	⑩ Panel flaps #1:DC12V #2-5: Louver control signal #6: DC12V #7-10: :Louver control signal	⑪ SPI #1,2:GND #3:SPI CONTROL #4:Not Used	⑫ Drain Pump #1:DC12V #2:DRAIN_PUMP_OUT
⑬ Human Sensor #1:DC12V #2:Com4_TXD #3:Com4_RXD #4:Human sensor reset #5:GND	⑭ External #1,3:DC12V #2:Error_CHK_OUT #4:Comp_CHK_OUT	⑮ External #1:EXT_CTRL #2:GND	⑯ COM1,COM2,V1,V2 F3-F4:Com2 V1-V2:DV12V F1-F2:Com1

5-1-2 Panel PCB



5-1-3 SLIM 1 WAY Indoor Unit

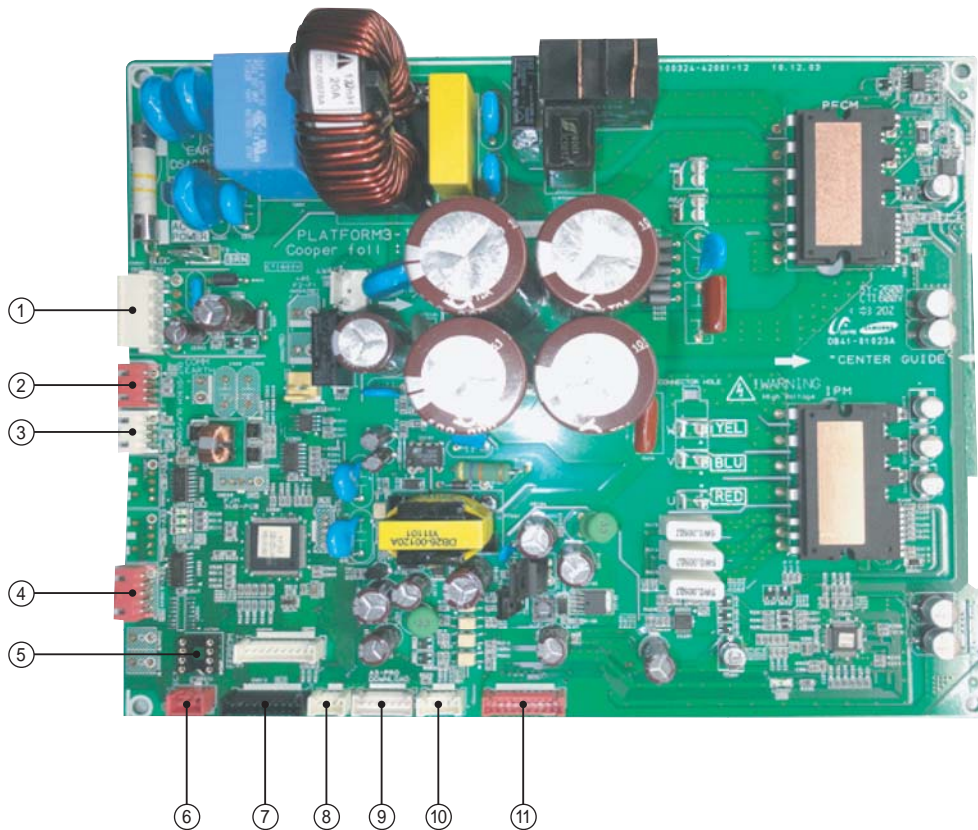


1. CN75-Ventilator Output #1 : POWER(N) #3 : POWER(L)	2. CN74-Ventilator Output #1 : POWER(N) #3 : POWER(L)	3. CN73-Fan Motor #1 : Capacitor Output #3 : SSR Output #5 : POWER(N)	4. CN71-AC POWER #1 : POWER(L) #3 : POWER(N)	5. CN44 - RPM Feedback #1 : DC5V #2 : GND #3 : RPM Feedback
6. CN32-DC12V Ouput #1 : DC12V #2 : GND	7. CN10-MICOM DOWNLOAD	8. CN91-DISPLAY #1,2,3,4,5 : LED Control #6 : Not used #7 : Remocon signal Input #8 : GND #9 : DC5V	9. CN60-STEP MOTOR #1 : DC12V #2,3,4,5 : LOUVER Control Signal output	10. CN81-External Output #1 : DC12V #2 : ERROR Signal output #3 : DC12V #4 : COMP Signal output
11. CN31 - COM1 COMM. #1 : F1 #2 : F2	12. CN33 - COM2 COMM. #1 : F3 #2 : F4	13. CN41 - THERMISTOR #1 : ROOM THERMISTOR #2 : GND #3 : EVA-IN THERMISTOR #4 : GND	14. CN42 - EVA OUT THERMISTOR #1 : EVA OUT THERMISTOR #2 : GND	15. CN51 - FLOAT SENSOR #1 : FLOAT S/W SENSOR #2 : GND
16. CN83- EXT CTRL #1 : ON/OFF External Control #2 : GND	17. Delete	18. CN45-SPI #1,2 : SPI Signal Output #3 : DC12V		

5-1-4 Outdoor Unit PCB

Outdoor Unit PCB (cont.)

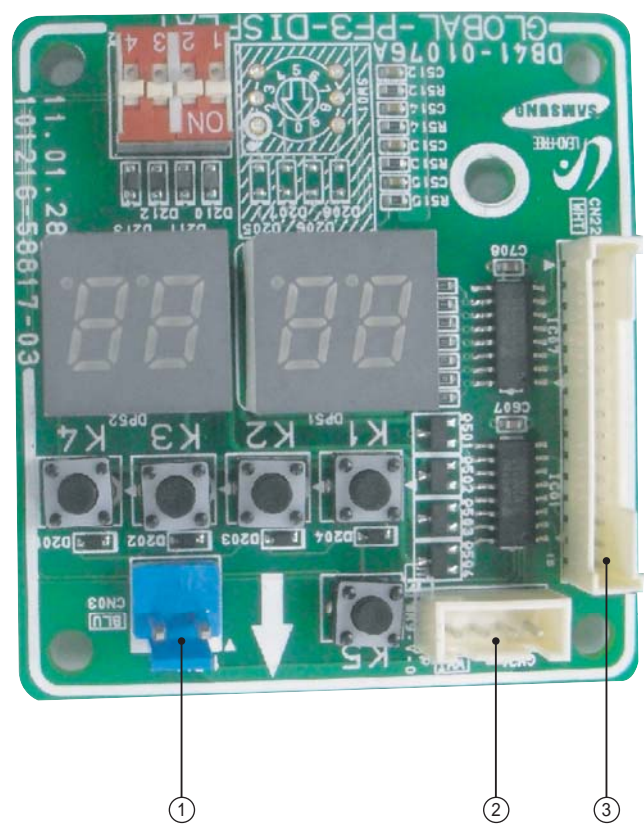
■ Main PCB



① OLP /COND THERMISTOR CONNECTOR	SMAW250A-04 WHT
② OUT/DISCHARGE THERMISTOR CONNECTOR	SMAW250A-04 RE
③ BLDC-FAN CONNETCOR	YAN396-06V WHT
④ EEV-A CONNECTOR	SMAW250A-05 RED
⑤ DISPLAY CONNECTOR	SMW200-10 NTR
⑥ DISPLAY CONNECTOR	SMAW250A-03 RED
⑦ PC DOWNLOADCONNECTOR	SMW200-10 BLK
⑧ S N E T CONNECTOR	SMW200-04 NTR
⑨ AS-PRO DOWNLOAD CONNECTOR	SMAW200A-07 WHT
⑩ DISPLAY CONNE CTORS	MW200-05 NTR
⑪ DOWNLOAD-INV CONNECTOR S	MW200-10 RED

Outdoor Unit PCB (cont.)

■ Sub PCB

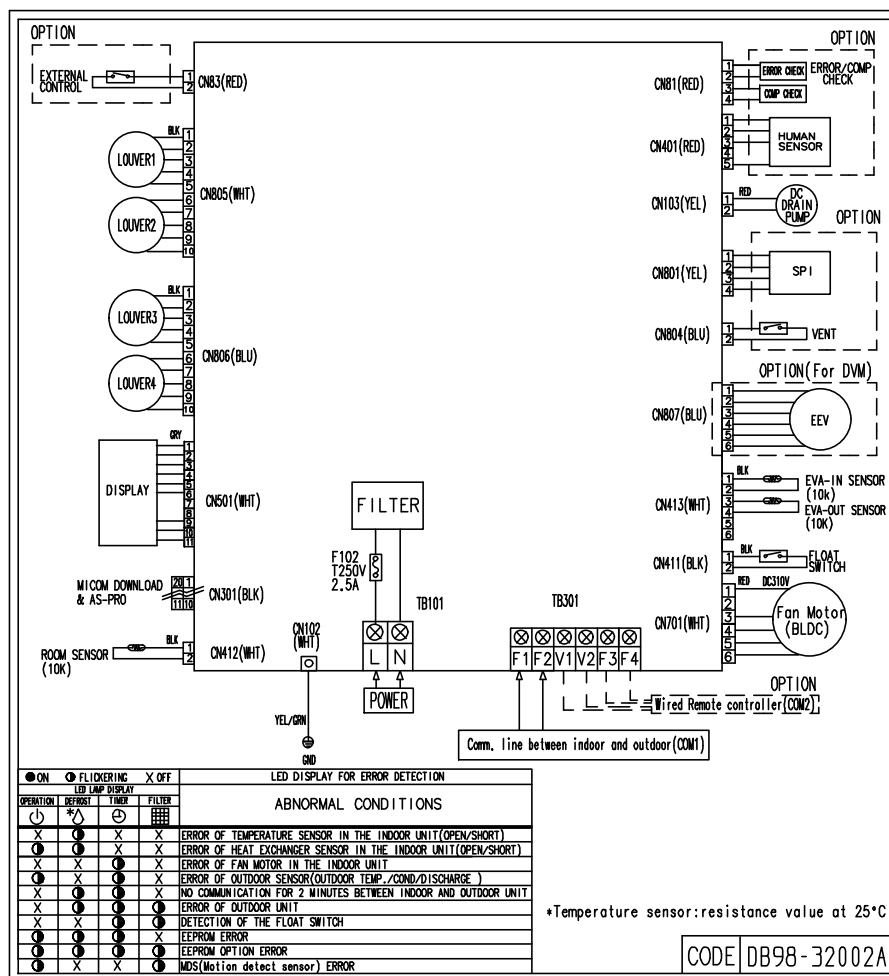


① 12V POWER CONNECTOR	YW396-02V BLU
② MAIN -SUB SIGNAL CONNECTOT	SMW250-04 WHT
③ MAIN -SUB SIGNAL CONNECTOT	SMW200-15NTR

6. Wiring Diagram

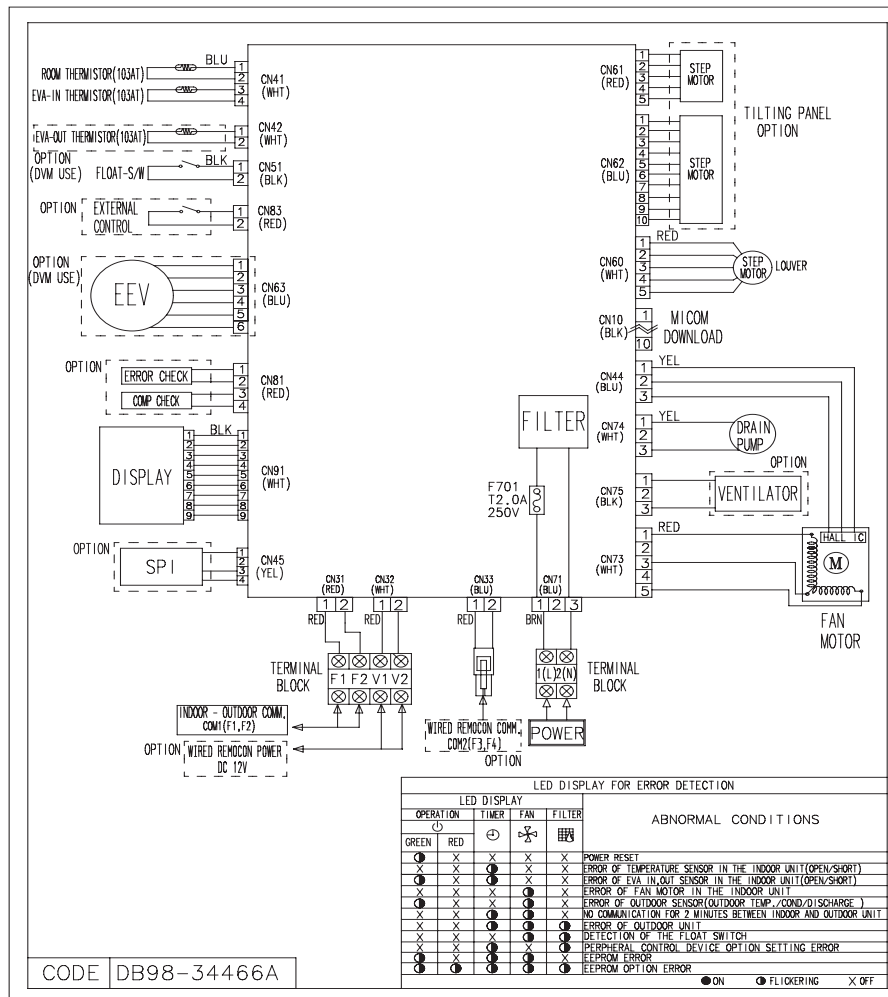
6-1 Indoor Unit

6-1-1 MINI 4 WAY Indoor Unit



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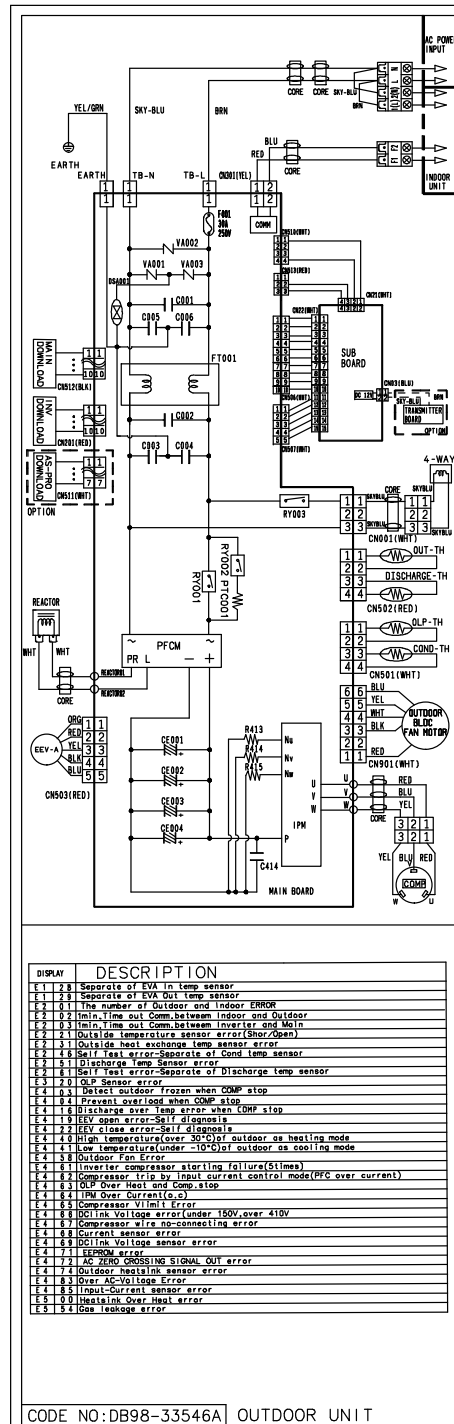
6-1-2 SLIM 1 WAY Indoor Unit



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Outdoor Unit : RC060DHXEA/ RC071DHXEA

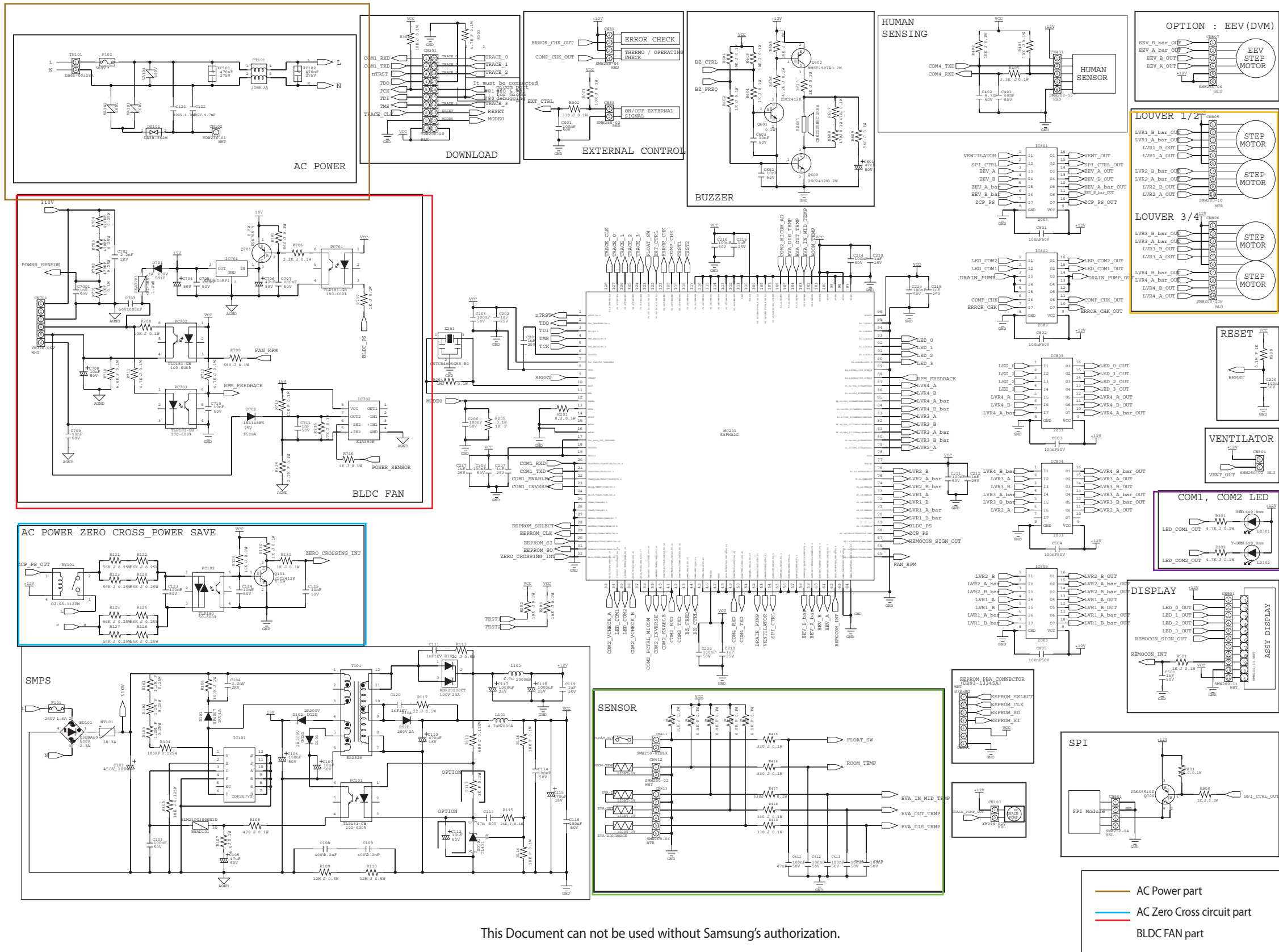


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7. Schematic Diagram

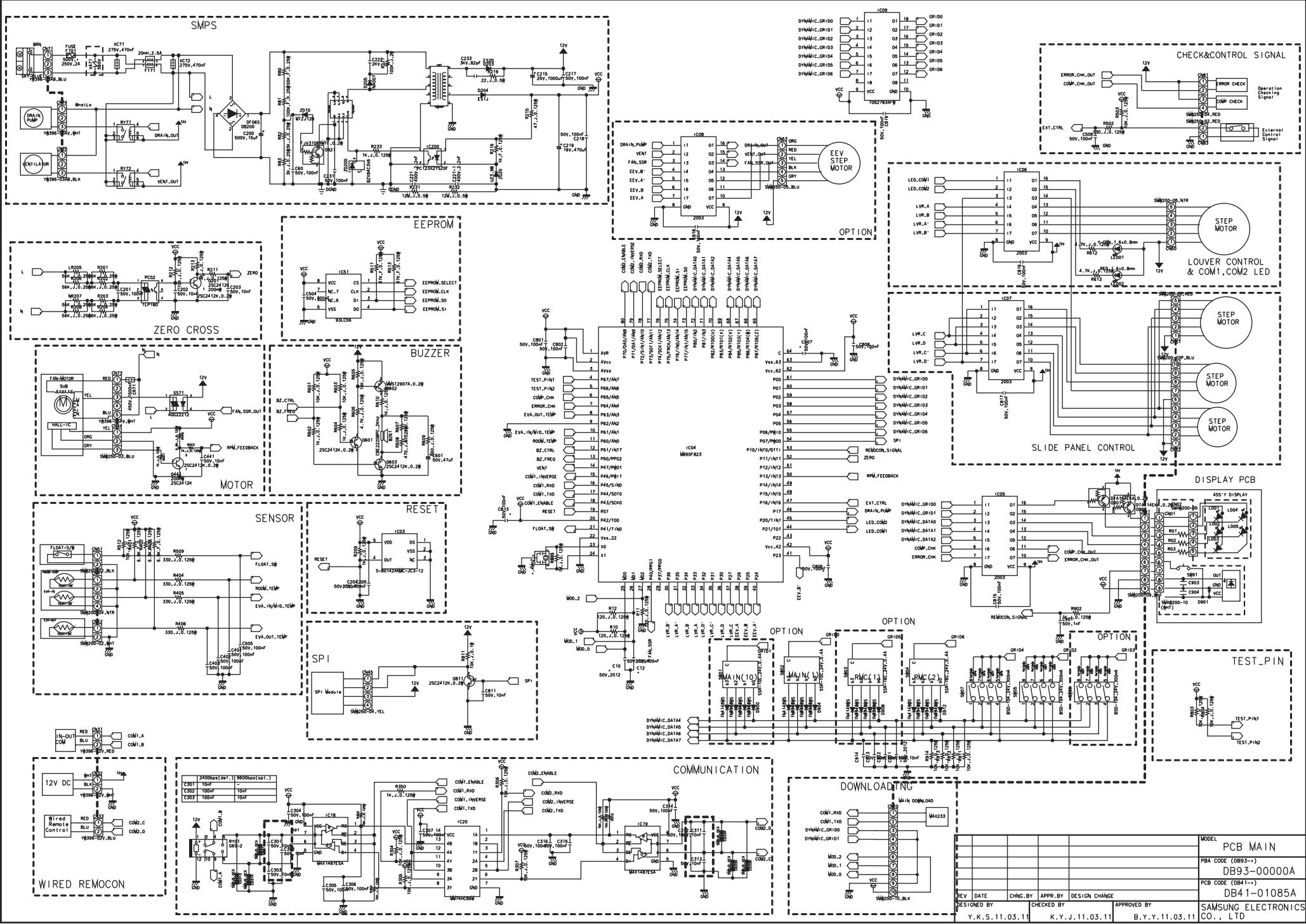
7-1 Indoor Unit

7-1-1 MINI 4 WAY MAIN PCB

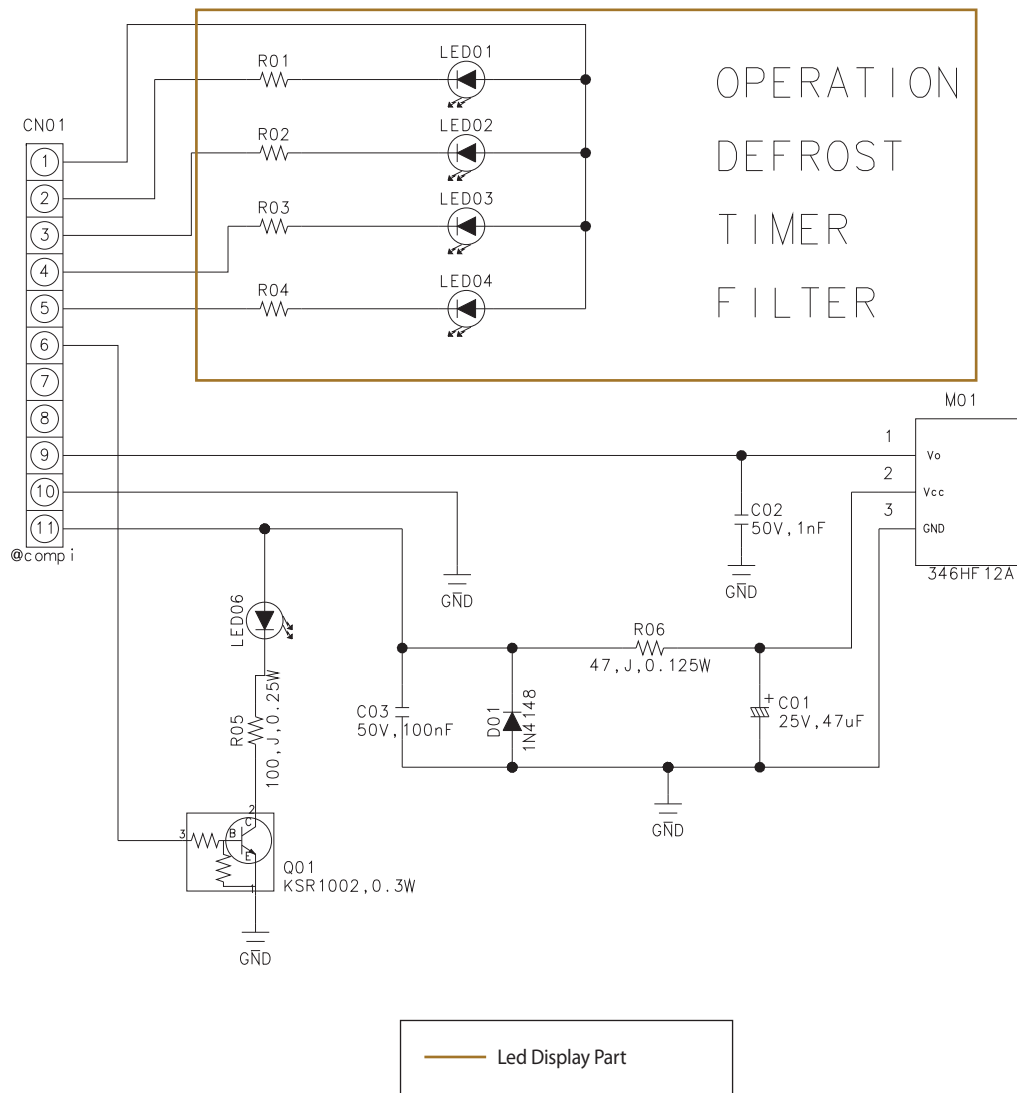


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7-1-2 SLIM 1 WAY MAIN PCB

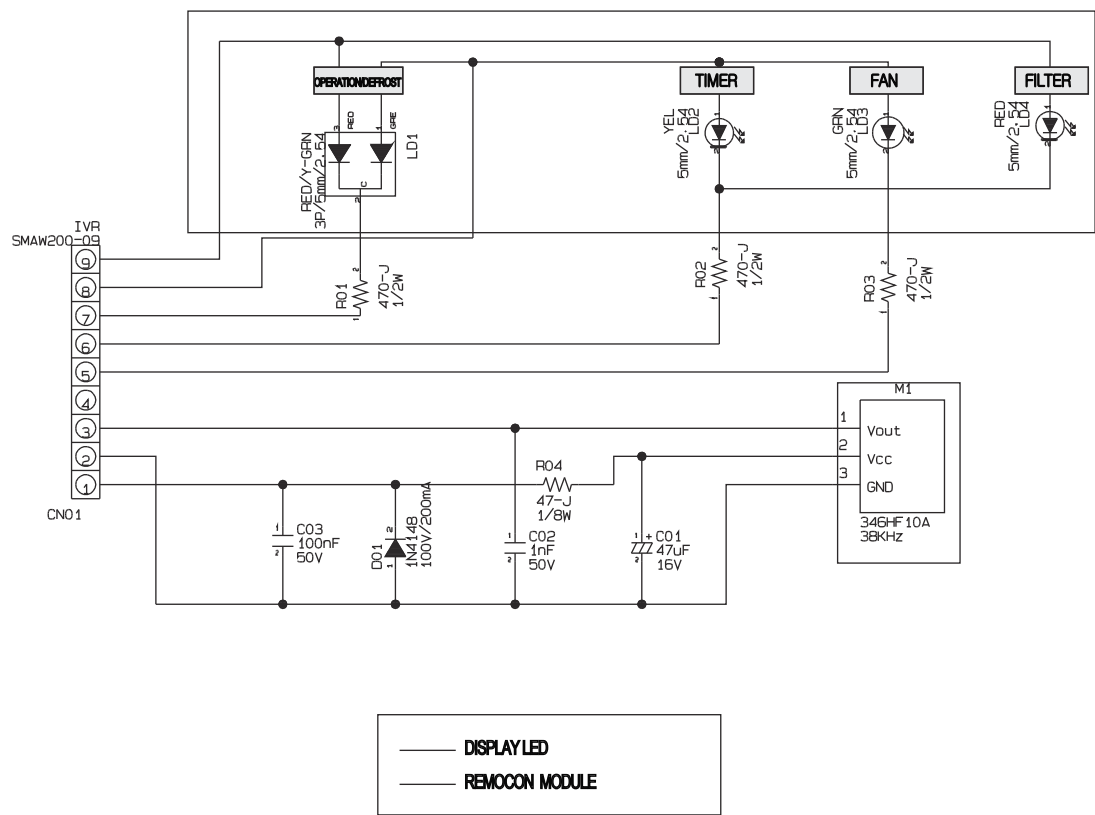


7-1-3 MINI 4 WAY PANEL PCB



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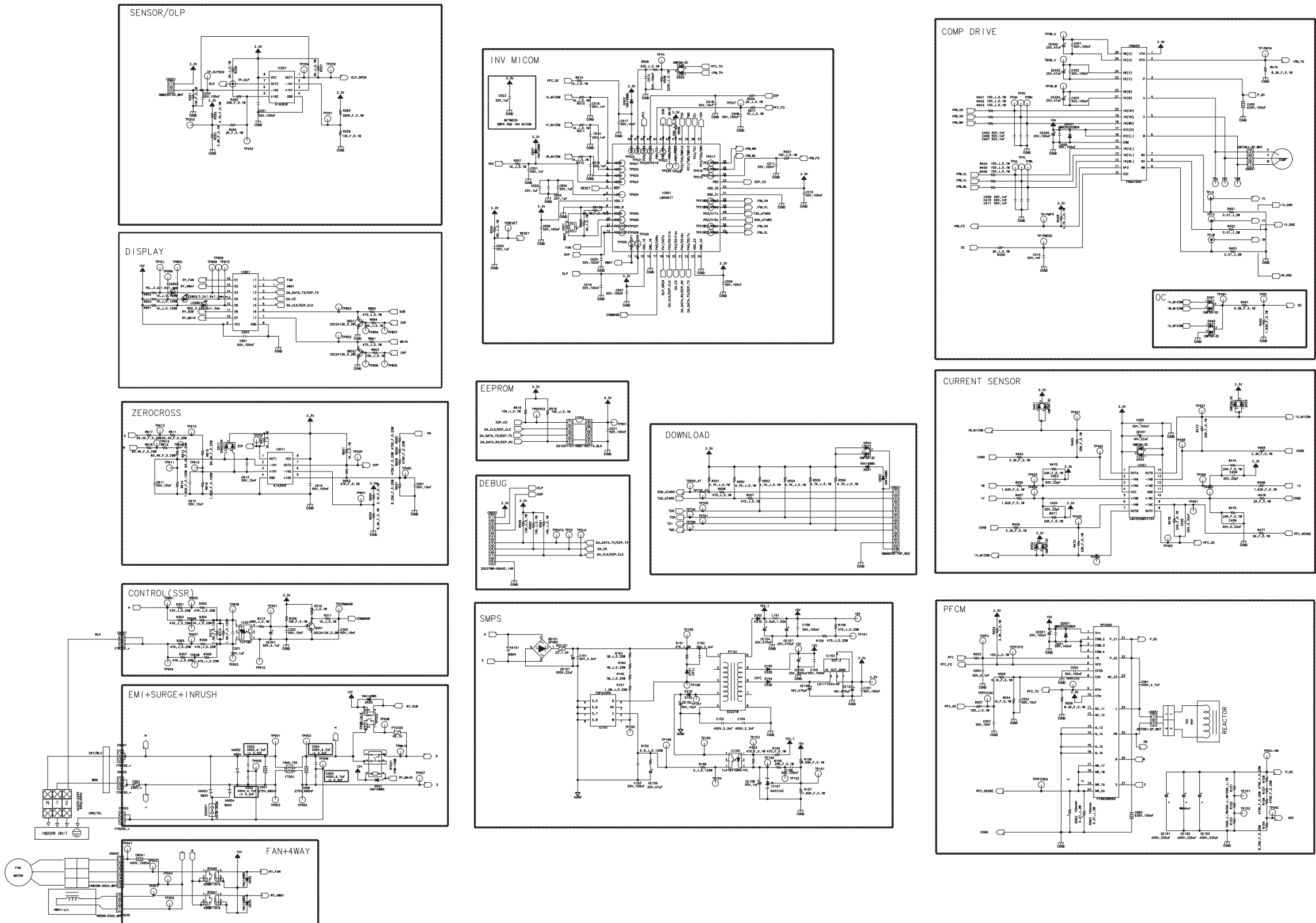
7-1-4 MINI 4 WAY PANEL PCB



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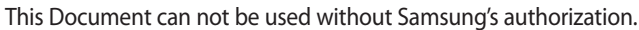
7-2 OUTDOOR UNIT PCB

■ MAIN PCB (RC060DHXEA/ RC071DHXEA)



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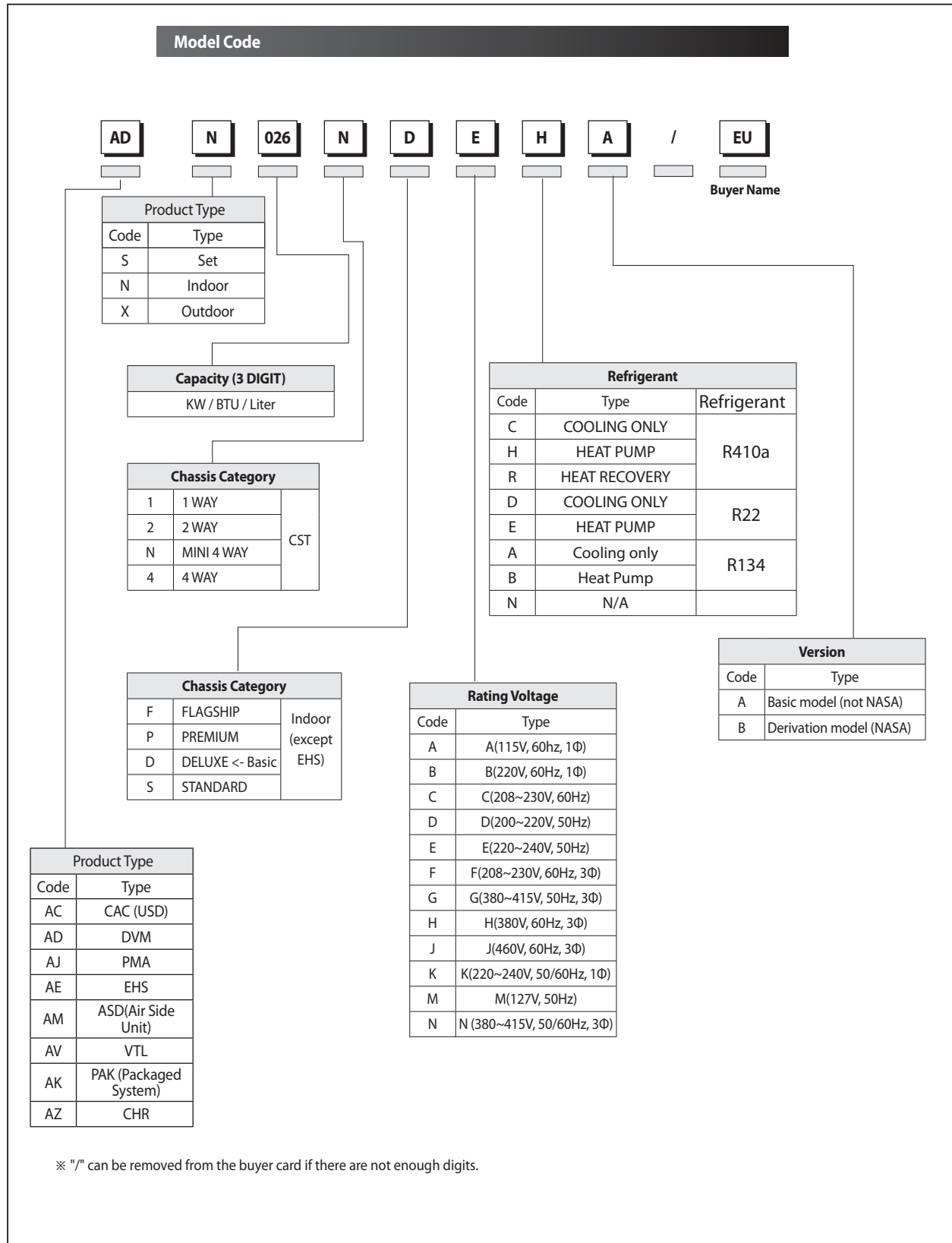
■ SUB PCB (RC060DHXEA/ RC071DHXEA)



8. Reference Sheet

8-1 Index for Model Name

8-1-1 Indoor Unit



Index for Model Name (cont.)

Indoor Unit Model Code

NS	071	L	D	X	E	A	/	-	-	-
(1)	(2)	(3)	(4)	(5)	(6)	(7)				Buyer code

(1)Product Type		
N	D	DVM
	J	FJM
	M	MULTI
	S	SINGLE(CAC)
	H	Hydro-Box

(2)Capacity
HP / KW / BTU / TON

(3)Chassis		
1	1WAY	CST
2	2WAY	
M	MINI 4 WAY	
4	4WAY	
H	High Static Pressure	DUCT
S	Middle Static Pressure	
L	Low Static Pressure	
C	CEILING	CONV
J	CONSOLE	
F	PAC	
P	FAC	
B	Mont Blabc	RAC
V	VIVACE	
Q	NEO-FORTE(EEV)	
N	NEO-FORTE	

(4)MODE	
C	C/O
H	H/P
T	Tender
V	Value

When grade classification is necessary	
Z	H/P (Flagship)
P	H/P (Premium)
D	H/P (Deluxe)
S	H/P (Standard)
CP	H/P (Premium)

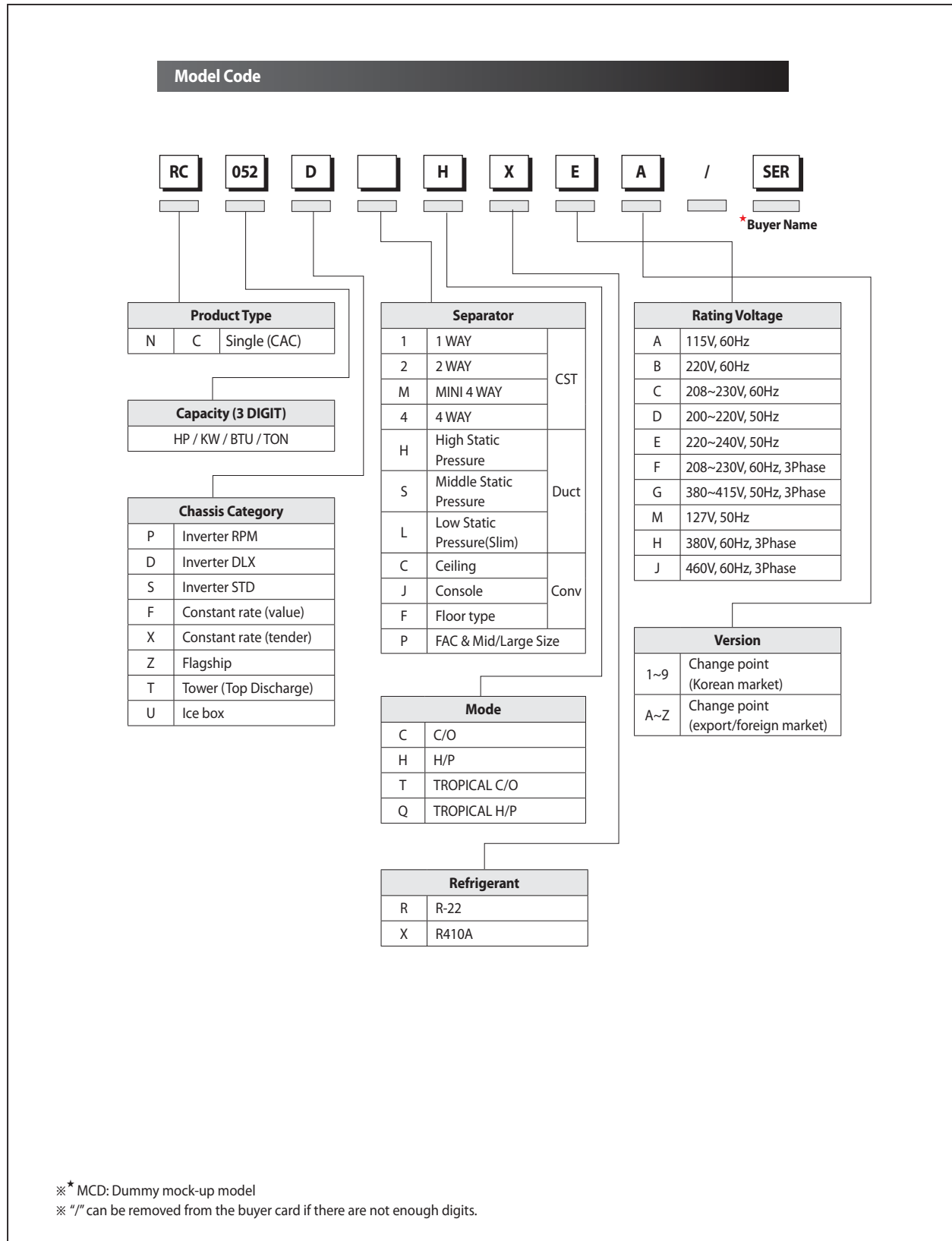
(5)Refrigerant	
R22	R
R410A	X

(6)Power Supply	
Normal	N
115V,60Hz	A
220V,60Hz	B
208~230V,60Hz	C
200~220V,50Hz	D
220~240V,50Hz	E
208~230V,60Hz,3Φ	F
380~415V,50Hz,3Φ	G
127V, 50Hz	M
380V/60Hz,3Φ	H
460V,60Hz,3Φ	J

(7) VERSION	
1~9	KOREAN
A~Z	EXPORT
Z	The Z version is a high-efficiency EEV Mode indoor unit.

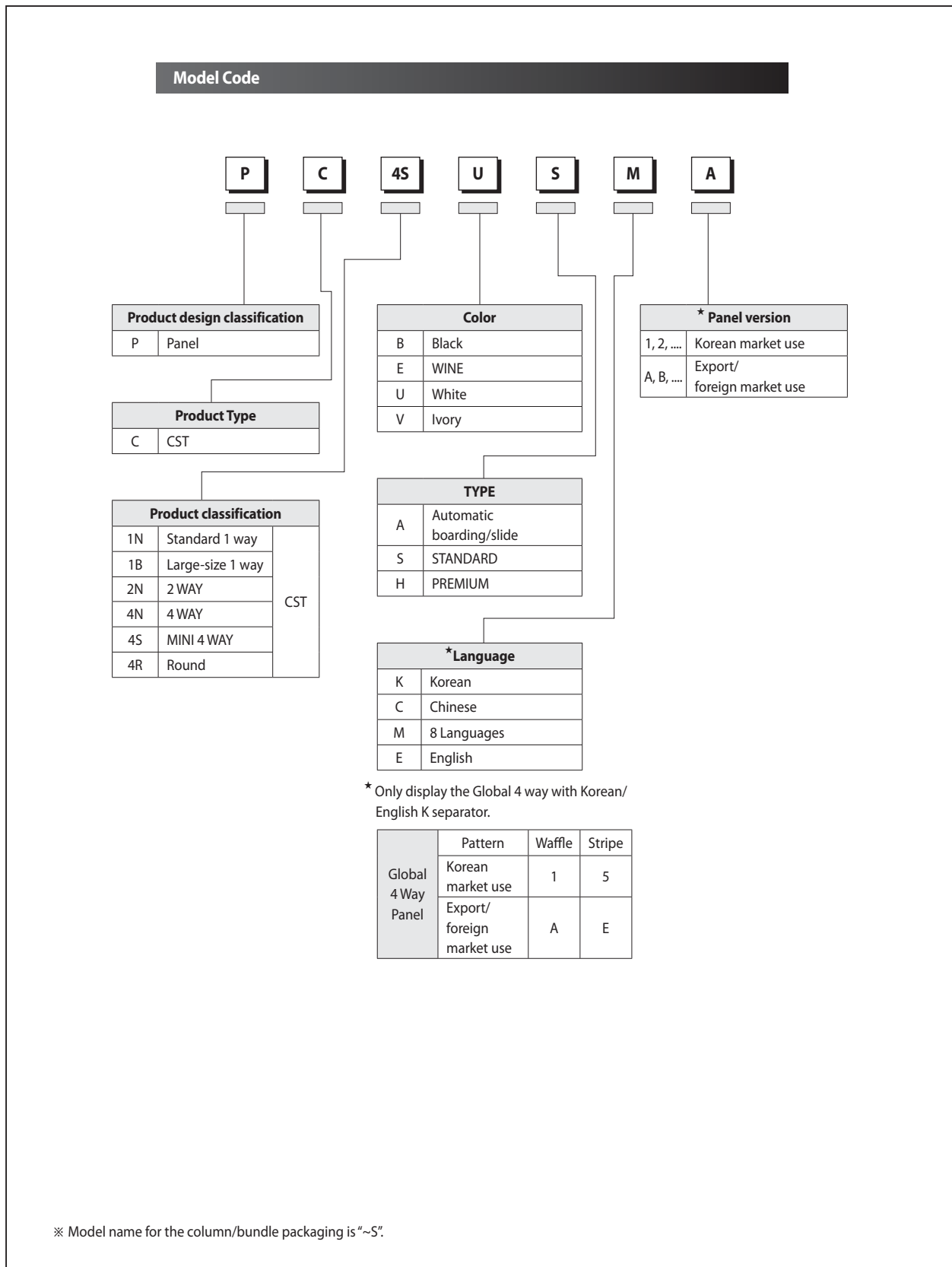
Index for Model Name (cont.)

8-1-2 Outdoor Unit

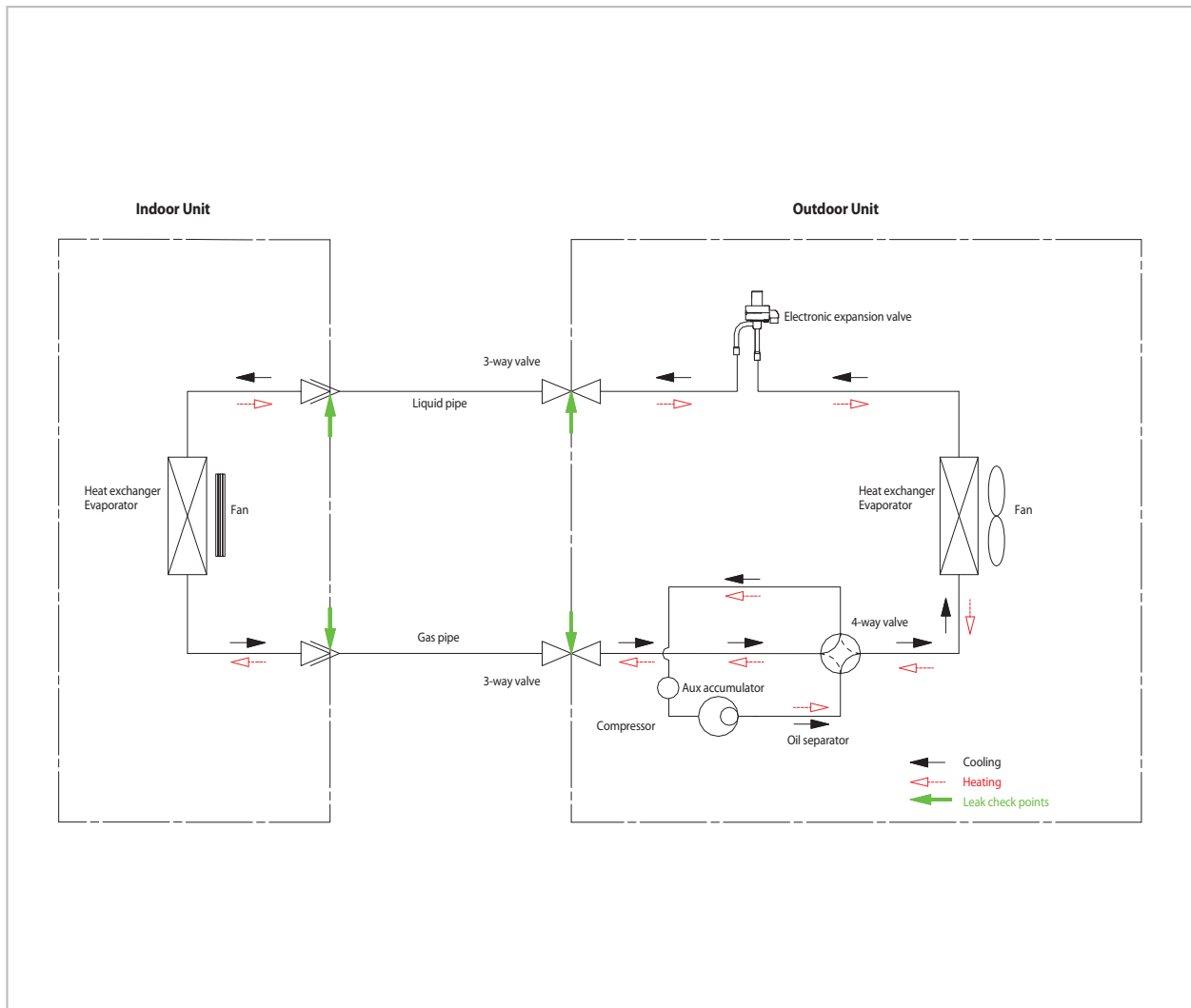


Index for Model Name (cont.)

8-1-3 Panel



8-2 Refrigerating Cycle Diagram



■ CONDENSER

High temperature and high pressure gas state coolant discharged from the compressor is converted to a liquid state as it is cooled down by the heat emission in the outdoor condenser unit, and sent to the evaporator.

■ COMPRESSOR

Low temperature and low pressure coolant is compressed and sent to the cycling system

■ EVAPORATOR

Liquid coolant sucked in through the capillary tubes cools down the room by absorbing the surrounding heat as it evaporates (converting from liquid to gas). (Absorbing heat required for evaporation)

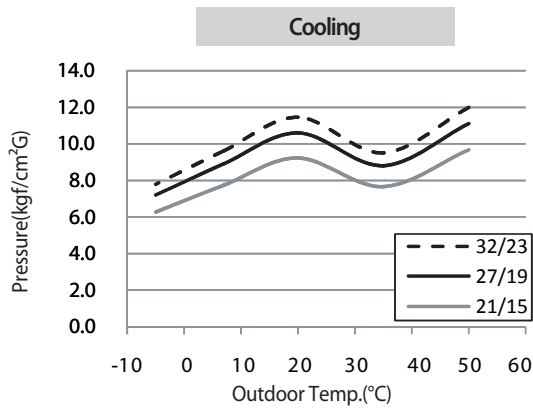
■ SERVICE VALVE

You can open the valve by turning the need valve counterclockwise using hex wrench, and it is used for vacuum, gas purging, coolant injection, coolant purging, and indoor-outdoor unit connection.

■ ACCUMULATOR

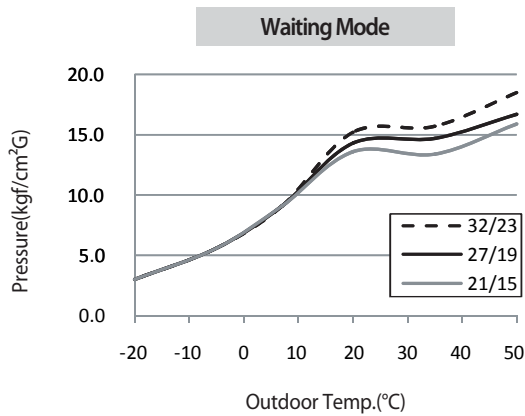
Accumulator prevents the flow of liquid-state coolant into the compressor. (Liquid-state coolant flowing into the compressor will overload the compressor.)

8-3 Pressure Graph



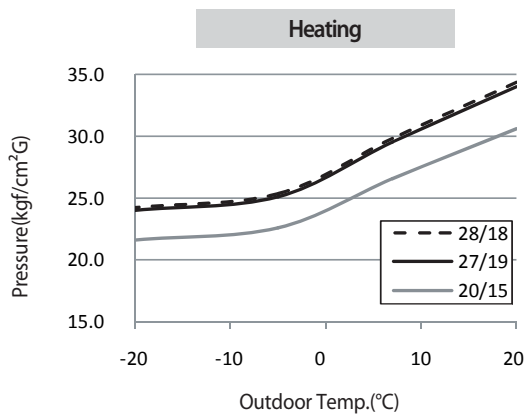
* Cooling

Indoor (°C) Outdoor (°C)	32/23	27/19	21/15
50	12.0	11.1	9.7
35	9.5	8.8	7.7
20	11.4	10.6	9.2
7	9.6	8.9	7.7
-5	7.8	7.2	6.3



* Waiting Mode

Indoor (°C) Outdoor (°C)	32/23	27/19	21/15
50	18.5	16.7	15.9
35	15.7	14.7	13.4
20	15.2	14.3	13.6
7	9.1	9.1	9.1
-5	5.6	5.6	5.6
-20	3.0	3.0	3.0



* Heating

Indoor (°C) Outdoor (°C)	28/18	27/19	20/15
20	34.3	34.0	30.6
7	29.8	29.5	26.6
-5	25.4	25.1	22.6
-20	24.2	24.0	21.6



GSPN(Global Service Partner Network)

Area	Web Site
Europe	http://gspn1.samsungcsportal.com
CIS	http://gspn1.samsungcsportal.com
Mideast & Africa	http://gspn1.samsungcsportal.com
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